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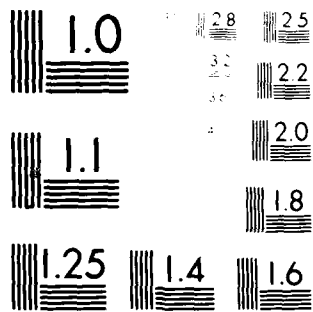
AIR FORCE OCCUPATIONAL MEASUREMENT CENTER RANDOLPH AFB TX F/G 5/1  
INTEGRATED AVIONICS MANUAL TEST STATION AND COMPONENT SPECIALTY--ETC(U)  
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UNITED STATES AIR FORCE

# OCCUPATIONAL SURVEY REPORT



INTEGRATED AVIONICS MANUAL TEST STATION  
AND COMPONENT SPECIALTY

AFSCs 326X5A/B

AFPT 90-326-428E

NOVEMBER 1981

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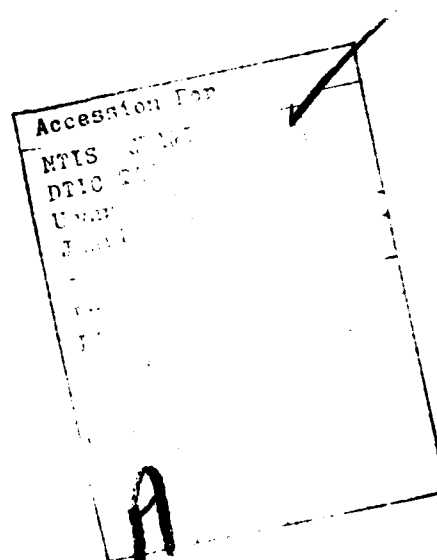
OCCUPATIONAL ANALYSIS PROGRAM  
USAF OCCUPATIONAL MEASUREMENT CENTER  
AIR TRAINING COMMAND  
RANDOLPH AFB, TEXAS 78150

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## PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Integrated Avionics Manual Test Station and Component Specialty. The project was directed by USAF Program Technical Training, Volume 2, dated June 1980. Authority for conducting occupational surveys is contained in AFR 35-2. Computer printouts from which this report was produced are available for use by operating and training officials.

The United States Air Force occupational survey program originated in 1956 when the Air Force Human Resources Laboratory began the initial research into developing the methodology for conducting occupational surveys. In 1967, Air Training Command established an occupational survey program which produced 12 enlisted career ladder surveys annually. The program was expanded in 1972 to produce surveys of 51 career ladders each year and again in 1976 to include the survey of officer utilization fields, to permit special management applications projects, and to support interservice or joint service occupational analyses.

The survey instrument used in this project was developed by Captain Gary Patterson, Inventory Development Specialist. Captain Linda Wiekhorst analyzed the survey data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

Copies of this report are available to air staff sections, major commands, and other interested training and management personnel upon request to the USAF Occupational Measurement Center, attention to the Chief, Occupational Survey Branch (OMY), Randolph AFB, Texas 78150.

This report has been reviewed and is approved.

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## SUMMARY OF RESULTS

1. Survey Objective: This report was requested by the Training Staff officer (HQ ATC/TTQG). Key issues include use of survey data to determine job variations and training requirements since a restructuring of the avionics systems career field. Additionally, a question was raised as to the feasibility of shredding at the 7-skill level.
2. Survey Coverage: USAF job inventory booklets were administered worldwide to personnel in the 326X5A, 326X5B, and 32675 specialties from December 1980 to April 1981. The 309 respondents represent approximately 72 percent of the assigned AFSC 326X5 population. Each shred is adequately represented, with 70 percent of the A-shred, and 62 percent of the B-shred personnel assigned responding.
3. Job Structure: Three clusters and one independent job type were identified. Each cluster is characterized by an AFSC--326X5A (F/FB-111), 326X5B (F-15), and 32675. The F/FB-111 cluster respondents show the most diversity in jobs, specializing in various test station maintenance functions. The F-15 cluster respondents formed only two job types based on experience and perform a very homogeneous function. Senior personnel grouped into a management cluster, and training personnel formed a separate independent job type.
4. DAFSC Analysis: A normal progression of responsibilities is performed from the 3- to 7-skill level. Shred designations at the 3- and 5-skill level for aircraft specific systems tend to force this progression from technical (3- and 5-skill levels) to supervisory (7-skill levels) tasks. AFS 326X5A respondents indicated a greater difference in responsibilities between the 3- and 5-skill level, than did AFS 326X5B respondents; no substantial difference was found between 3- and 5-skill level F-15 respondents. The only commonality between the A- and B-shred are general test station and LRU maintenance tasks.
5. AFR 39-1 Specialty Descriptions: The major functions performed by all skill level personnel are included in the current specialty descriptions. Considering the diverse types of test stations and LRU's AFS 326X5 personnel maintain or operate, the specialty descriptions provide a good general overview of the functions they perform. Minor additions of some commonly performed forms and supply functions could provide a more comprehensive specialty description.
6. Major Command Analysis: Several differences are apparent among operational major commands utilizing AFS 326X5 personnel. For the AFS 326X5A and 32675 respondents, many of these differences are a function of the particular model(s) of aircraft involved and its associated equipment. Unlike the AFS 326X5A personnel, the 326X5B specialty incumbents show very little variation between major command or model of aircraft.
7. Job Satisfaction Indicators: A definite difference appears between AFS 326X5A and AFS 326X5B respondents in job attitudes. AFSC 326X5A (F/FB-111) incumbents responded much more positively than AFS 326X5B (F-15) respondents, especially in the area of perceived utilization of talents and training. Reenlistment intentions, however, are consistent for both specialty shreds.

8. Training Analysis: First enlistment personnel were found in each of the jobs involving technical skills. A solid core of tasks is performed by first-termers in each shred. These tasks were rated high in training emphasis and tended to be equipment specific, focusing on F/FB-111 or F-15 tasks. Training documents (STS and POI) are generally comprehensive; however, several items of equipment utilized by specialty respondents were not mentioned.

9. Implications: Survey data indicate different jobs are performed by AFS 326X5A, 326X5B, and 32675 personnel. The only commonality exists in the performance of very general test station, LRU, or forms maintenance. These data tend to confirm the current classification structure as accurate through the 5-skill level. Although 7-skill level personnel perform common supervisory and management functions, they also perform technical tasks specific to each aircraft system (shred). Important to note is that most OJT is performed by 7-skill level personnel. The technical tasks performed by 7-skill levels would indicate a need for shred designations through the 7-skill level. It will be difficult, however, to have 7-skill level shredouts with such a small 7-skill level population.

OCCUPATIONAL ANALYSIS OF THE INTEGRATED  
AVIONICS MANUAL TEST STATION AND COMPONENT SPECIALTY  
(AFSCs 326X5A, 326X5B, AND 32675)

I. INTRODUCTION

This is a report of an occupational survey of the Integrated Avionics Manual Test Station and Component Specialty, with two shred designations, AFS 326X5A for F/FB-111 aircraft and AFS 326X5B for F-15 aircraft manual test stations. The survey was initiated at the request of Training Staff personnel (HQ ATC/TTQG) to determine job content and training requirements since restructuring the avionic systems career field in October 1978 and April 1979. Previous occupational surveys involving the functions currently performed by AFS 326X5 personnel were conducted in March 1973 and September 1975. Due to the complexity of the classification changes since 1975, no comparison could be made between current survey responses and 1975 findings.

Background

As outlined in the AFR 39-1 Specialty Descriptions, AFS 326X5 personnel maintain, install, calibrate, and certify avionics manual test stations/consoles. They work with integrated avionic systems components to the intermediate maintenance level, as well as associated support equipment.

The integrated avionics specialties have undergone several major classification changes since their creation. As the technology surrounding avionic systems has evolved, so has the classification of these systems. Functions of the present day 326X5 specialty were originally performed by the 326X0 Avionics AGE and 326X1A Integrated Avionics Component Navigation/Flight and Weapons Control specialties (see Figure 1). In 1977, the first of several classification changes for these specialties occurred. The 326X0 and 326X1A specialties were shredded according to type of avionics; manual, automatic or electronic warfare (EW), with the 326X0A and 326X1C becoming the manual portion. The distinction between Avionics AGE and Avionics components continued (326X0A and 326X1C respectively) until 1978 when test station and LRU maintenance were combined. AFS 326X1G became the designator for manual integrated avionics for the F-15 and F/FB-111 aircraft systems. The most recent classification change to AFS 326X5, effective in 1979, changed the name and designated shreds through the five level for personnel maintaining F/FB-111 (A-shred) and F-15 (B-shred) aircraft systems. An additional shred (C) is planned for personnel working on F-16 aircraft.

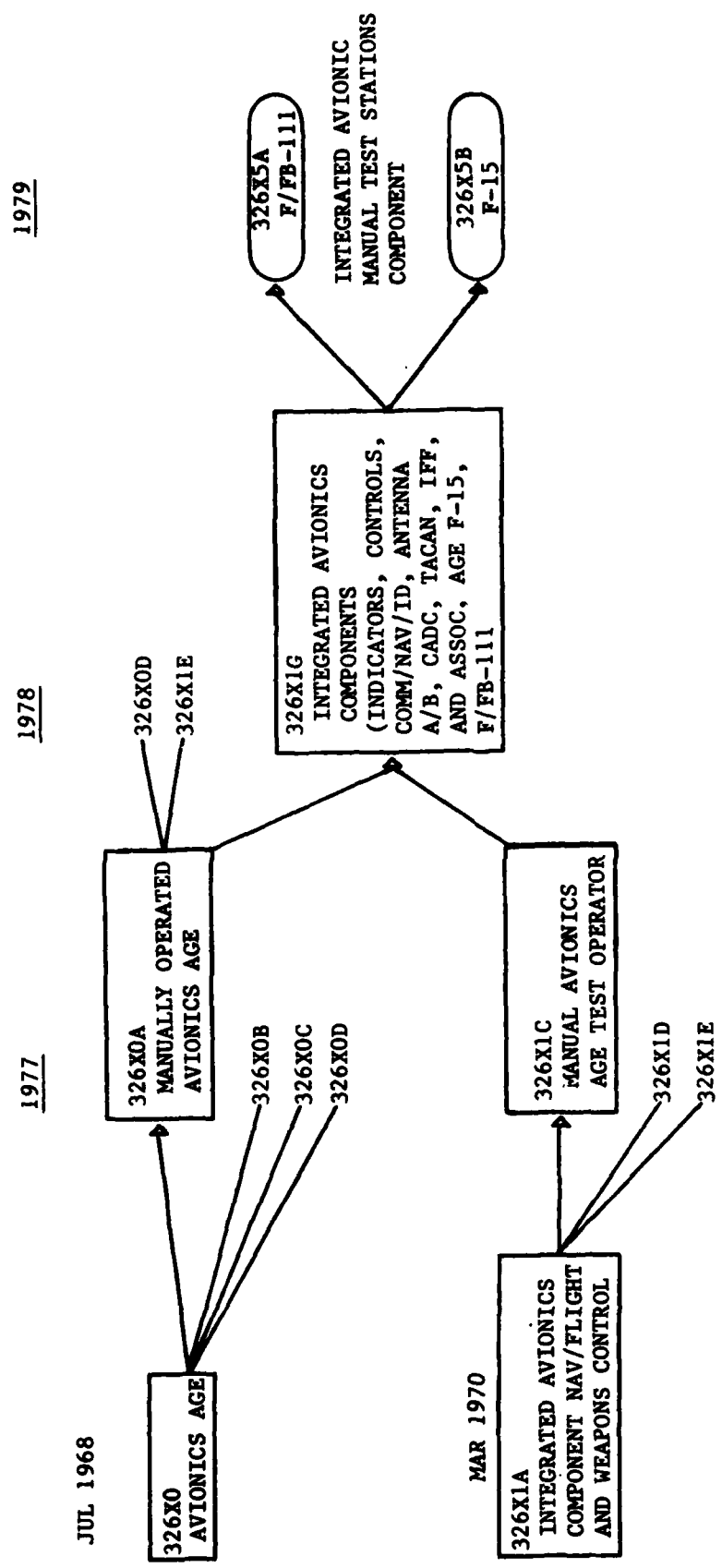
Formal training for specialty members is available at Lowry AFB, CO. The 3ABR32635A F/FB-111 course is 108 days, and the 3ABR32635B F-15 course is 75 days. Upon completion, graduates are awarded a 3-skill level and are assigned to various F-15 or F/FB-111 units worldwide.

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FIGURE 1

INTEGRATED AVIONICS MANUAL TEST STATION AND COMPONENT CLASSIFICATION CHANGES



## Objectives

This report will examine the Integrated Avionics Manual Test Station and Components specialty on the basis of tasks performed and the time spent on these tasks by the survey respondents. Using occupational survey data along with other sources, Air Force managers can determine the most efficient way to classify and manage these manpower resources. Topics discussed in this report include: (1) development and administration of the survey instrument; (2) the job structure relationship of the specialty in regards to AFSC, shred, and experience level; (3) comparisons between shreds; (4) the training emphasis and task difficulty of integrated avionics tasks relating to manual test stations; (5) comparisons of the job structure and other survey data with specialty documents, such as AFR 39-1 Specialty Descriptions, Specialty Training Standards, and Plans of Instruction; and (6) job satisfaction and related background information.

## II. SURVEY METHODOLOGY

### Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-326-428E. As a starting point, tasks from the previous inventories were reviewed and revised through a comprehensive research of publications and directives, and through interviews with training and classification personnel. The task list was then evaluated in the field through personal interviews with 21 subject matter specialists. These personal interviews were conducted at Lowry AFB, Plattsburg AFB, Cannon AFB, Nellis AFB, Barksdale AFB, Mt. Home AFB, Langley AFB, and Kelly AFB. The resulting job inventory contained a comprehensive listing of 751 tasks grouped under 20 duty headings and a background section containing such information as grade, duty title, time in service, equipment used, and job satisfaction.

### Survey Administration

During the period December 1980 through April 1981, Consolidated Base Personnel Offices (CBPOs) in operational units worldwide administered the inventory to job incumbents holding a 326X5 DAFSC. These respondents were selected from a computer generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual who completed the inventory first completed an identification and biographical information section and then checked each task performed in their current job. After checking all tasks performed, each member then rated each of these tasks on a nine-point scale showing relative time spent on the task as compared to all other tasks checked. The ratings ranged from one (very small amount time spent) through five (about average time spent) to nine (very large amount time spent).

To determine relative time spent for each task checked by a respondent, all an incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task is then divided by the total task ratings and multiplied by 100. This procedure provides a basis for comparing tasks in terms of both percent members performing and relative percent time spent.

### Task Factor Administration

In addition to completing the job inventory, selected senior personnel assigned to F/FB-111 and F-15 units were also asked to complete a second booklet for either training emphasis or task difficulty. The task difficulty and training emphasis rating booklets are processed separately for the job inventories. This information is used in a number of different analyses discussed in more detail within the report.

Task Difficulty. Each senior NCO completing a task difficulty booklet was asked to rate only the tasks related to the aircraft system they maintain test stations for. The tasks are rated on a nine-point scale from extremely low to extremely high as to the relative difficulty of that task. Difficulty is defined as the length of time it requires an average person to learn to do that task. Task difficulty data were independently solicited from experienced 7- or 9-skill level personnel stationed worldwide in each shred. The interrater reliability (as assessed through components of variance of standard group means) for the 20 F/FB-111 and 23 F-15 raters who returned booklets was .86 and .89, respectively. Due to the small population of senior (7-skill level personnel) in the specialty, sampling was difficult and the interrater agreement is somewhat lower than desirable, but is within allowable limits. Ratings were adjusted so that tasks of average difficulty have ratings of 5.00. The resulting data is a rank ordering of tasks indicating a degree of difficulty for each task in the inventory.

Training Emphasis. Individuals completing training emphasis booklets were also asked to rate only the tasks related to the aircraft system they maintain test stations for. These tasks were rated on a ten-point scale from no training required to extremely heavy training. Training emphasis is a rating of tasks indicating where emphasis should be placed in structured training for first term personnel. Structured training is defined as training provided at resident technical schools, Field Training Detachments (FTD), Mobile Training Teams (MTT), formal OJT, or any other organized training method. The interrater reliability (as assessed through components of variance of standard group means) for these raters was also well within limits (.92 and .96, respectively, for the F/FB-111 and F-15 raters), indicating there is good agreement among raters within each aircraft system as to which tasks required some form of structured training and which did not. Tasks rated by the 23 raters in the A-shred (F/FB-111) had an average training emphasis rating of 2.6 and a standard deviation of 3.0. Tasks rated by the 23 raters in the B-shred (F-15) had an average training emphasis rating of 1.3 and a standard deviation of 2.6. (The low average ratings and high standard deviations is largely a function of surveying two specialties in the same instrument; this does not affect the relative ordering of tasks by emphasis recommended, which is the main objective).

When used in conjunction with other factors, such as percent members performing, the task difficulty and training emphasis ratings can provide an insight into the training requirements of each specialty. This kind of information may help validate the lengthening or shortening of specific units of instruction to refine various training programs.

### Survey Sample

Personnel were selected to participate in this survey so as to insure accurate representation across MAJCOM and paygrade groups. Table 1 reflects the percentage distribution, by major command, of assigned personnel in each specialty as of March 1981. Also reflected is the distribution, by major command, of incumbents in the final survey sample. The 309 respondents making up the final sample represent 72 percent of the 326X5 specialty (or 80 percent of those eligible to participate). Tables 2 and 3 reflect the distribution of the survey sample in terms of paygrade and AFMS groups. Generally the survey sample provides adequate representation of all segments of the specialty.

TABLE 1

#### COMMAND DISTRIBUTION OF SURVEY SAMPLE

COMMAND	AFS 326X5A		AFS 326X5B		AFS 32675	
	PERCENT OF ASSIGNED	PERCENT OF SAMPLED	PERCENT OF ASSIGNED	PERCENT OF SAMPLED	PERCENT OF ASSIGNED	PERCENT OF SAMPLED
ATC	8	8	9	9	9	7
SAC	33	34	-	-	10	9
TAC	33	29	48	55	29	29
USAFE	26	29	21	22	44	45
PACAF	-	-	19	14	8	6
OTHER	-	-	3	-	-	4

TOTAL 326X5A ELIGIBLE FOR SURVEY - 155  
TOTAL 326X5A IN SAMPLE - 109  
PERCENT OF 326X5A SAMPLED - 70%

TOTAL 326X5B ELIGIBLE FOR SURVEY - 191  
TOTAL 326X5B IN SAMPLE - 118  
PERCENT OF 326X5B SAMPLED - 62%

TOTAL 32675 ELIGIBLE FOR SURVEY - 82  
TOTAL 32675 IN SAMPLE - 82\*  
PERCENT OF 32675 SAMPLED - 100%

TOTAL 326X5 ASSIGNED - 428  
TOTAL ELIGIBLE FOR SURVEY\*\* - 386  
NUMBER OF ELIGIBLE RETURNED - 309  
RETURN RATE - 80%

\*INCLUDES TWO AFS 32699 RESPONDENTS

\*\*EXCLUDES TWO IN PCS STATUS, LESS THAN SIX WEEKS ON THE JOB, ETC.

TABLE 2

## PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

PAYGRADE	AFS 326X5A		AFS 326X5B		AFS 32675	
	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
AIRMAN	28	31	33	19	-	-
E-4	47	49	40	54	-	-
E-5	25	20	27	27	14	25
E-6	-	-	-	-	62	56
E-7	-	-	-	-	24	19

TABLE 3

## AFMS DISTRIBUTION OF SURVEY SAMPLE

AFS	MONTHS TIME IN SERVICE			
	1-48	49-96	97+	TOTAL
<u>326X5A</u>				
NUMBER IN SAMPLE	71	30	8	109
PERCENT OF 326X5A SAMPLED	65%	28%	7%	100%
<u>326X5B</u>				
NUMBER IN SAMPLE	75	30	13	118
PERCENT OF 326X5B SAMPLED	64%	25%	11%	100%
<u>32675</u>				
NUMBER IN SAMPLE	-	5	77	82
PERCENT OF 32675 SAMPLED	-	6%	94%	100%
<u>TOTAL SAMPLE</u>				
NUMBER IN SAMPLE	146	65	98	309
PERCENT 326X5 SAMPLED	47%	21%	32%	100%

### III. RESULTS

#### JOB STRUCTURE ANALYSIS

A key aspect of the USAF occupational analysis program is to examine the structure of specialties--what people are actually doing in the work environment rather than how official career field documents say they are organized. This analysis is made possible by the Comprehensive Occupational Data Analysis Programs (CODAP). These programs generate a number of statistical products used in the analysis of a specialty. To organize each individual's job into similar units of work, an automated job clustering program is used. This hierarchical grouping program is a basic part of the CODAP system. Each individual's responses form a job description. Each job description in the sample is compared to every other job description in terms of the types of tasks performed and the relative amount of time spent on each task in the inventory. The automated system is designed to locate the two job descriptions with the most similar tasks and percent time ratings and to combine them to form a group with a composite job description. In successive stages, other members were added to the initial group or new groups are formed based on the similarity of tasks and percent time ratings in each individual job description. This procedure is continued until all individuals and groups are combined to form a single composite representing the total sample. The resulting analysis of each job group identifies: (1) the number and characteristics of the different jobs which exist within the Integrated Avionics Manual Test Station and Component specialty; (2) the tasks which tend to be performed together by the same respondents; and (3) equipment and demographic information which may be peculiar to specific functional requirements as they exist at the time of the survey. The information is then used to examine the accuracy and completeness of present career field documents (AFR 39-1 Specialty Descriptions, Specialty Training Standards, etc.) and to formulate an understanding of current utilization patterns.

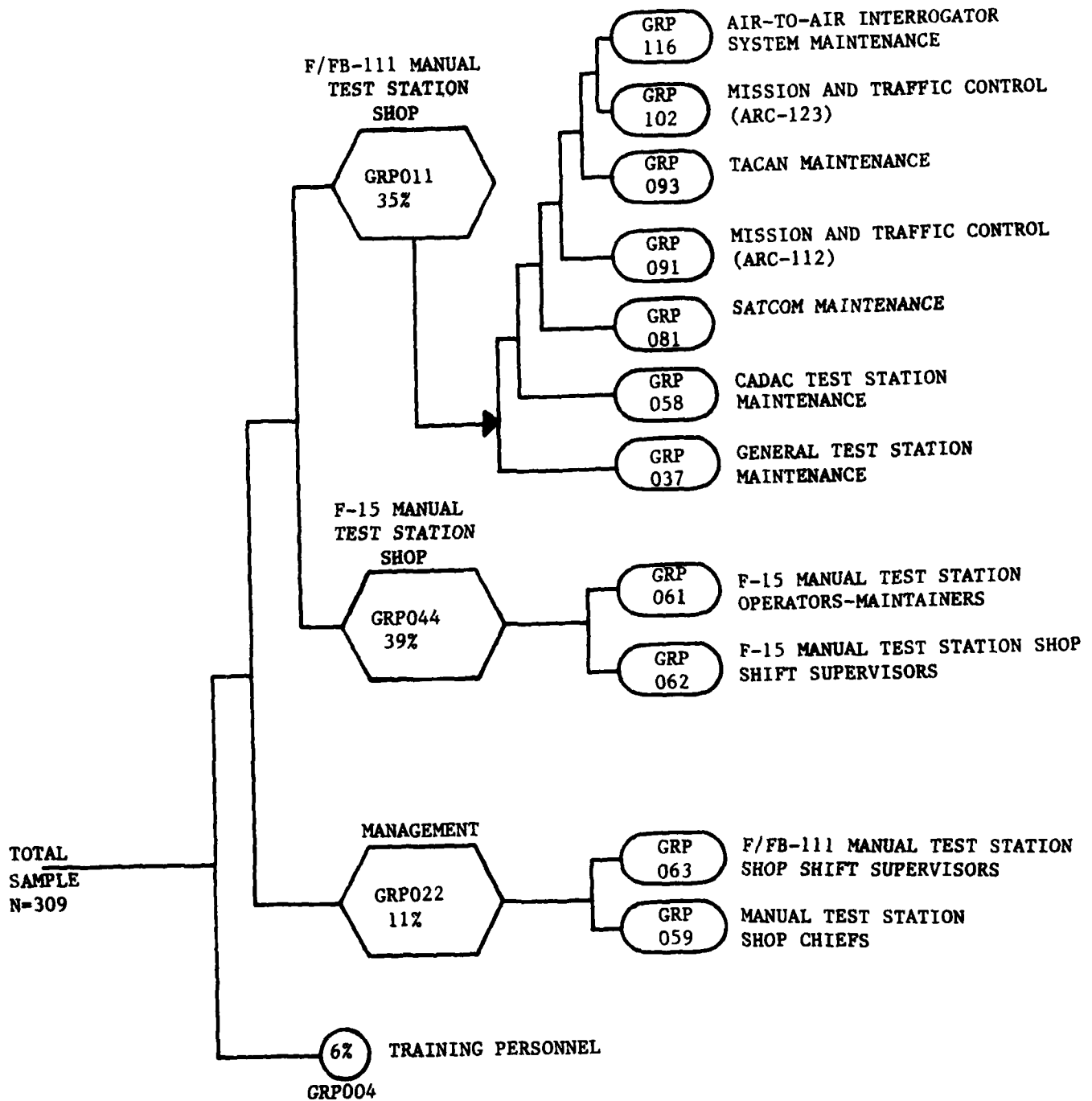
The basic identifying group used in the hierarchical job structure is the Job Type. A job type is a group of individuals who perform many of the same tasks and who spend similar amounts of time performing these tasks. When there is a substantial degree of similarity between different job types, they are grouped together in a Cluster. Finally, there are often specialized jobs that are too dissimilar to be grouped into any cluster. These unique groups are labeled Independent Job Types.

#### Job Structure Overview

For the 326X5 specialty, the job structure analysis identified four major areas of specialization (three clusters and one independent job type). These areas are distinguished on the basis of shop maintenance (F-15 or F/FB-111), supervision, or training functions. Several common maintenance functions are performed by both F-15 and F/FB-111 test station shop personnel. Representative tasks of this nature include:

FIGURE 2

INTEGRATED AVIONICS MANUAL TEST STATION  
AND COMPONENTS JOB STRUCTURE



- install caps, plugs, or dust covers on test stations, test equipment or LRUs
- pressurize LRUs
- visually inspect or clean LRUs
- clean test station blower filters
- perform confidence checks of test stations
- visually inspect or clean test stations
- perform periodic inspections of test stations
- inventory test stations or rollaways
- inspect equipment for correct calibration dates
- order parts by telephone
- remove or replace test station light bulbs, fuses or minor hardware
- perform functional checks or test and inspection (T and I) of LRUs issued from supply

Overall, 47 tasks were responded to by 30 percent or more of both F-15 and F/FB-111 test station maintenance cluster personnel. In conjunction, four pieces of test equipment--the Emergency Radio Test Equipment Groups (AN/URM-95A), Identification-Friend-or-Foe (IFF) Mode IV Computer Test Equipment Groups (KIR/KIT), Instrument Landing System (ILS) Test Sets, and Radar Test Sets AN/UPM-137--are also utilized by all test station shop maintenance personnel. As illustrated in Figure 2, the various clusters and independent job type grouped in the following manner according to similarity of tasks performed and the relative percent time spent on those tasks:

- I. F/FB-111 MANUAL TEST STATION SHOP PERSONNEL CLUSTER (GRP011, N=108)
  - a. Tactical Air Navigation (TACAN) Maintenance personnel (GRP093, N=8)
  - b. Air-to-Air Interrogator (AAI) System Maintenance (GRP116, N=6)
  - c. Mission and Traffic Control (ARC-123) Personnel (GRP102, N=40)
  - d. Mission and Traffic Control (ARC-112) Personnel (GRP091, N=13)
  - e. Satellite Communications (SATCOM) Maintenance Personnel (GRP081, N=9)
  - f. Central Air Data Computer (CADC) Test Station Maintenance Personnel (GRP058, N=7)
  - g. General Test Station Maintenance Personnel (GRP037, N=7)
- II. F-15 MANUAL TEST STATION SHOP PERSONNEL CLUSTER (GRP044, N=122)
  - a. F-15 Manual Test Station Shop Shift Supervisors (GRP062, N=5)
  - b. F-15 Manual Test Station Operators-Maintainers (GRP061, N=114)
- III. MANAGEMENT PERSONNEL CLUSTER (GRP022, N=34)
  - a. F/FB-111 Manual Test Station Shop Shift Supervisors (GRP063, N=15)
  - b. Manual Test Station Shop Chiefs (GRP059, N=8)
- IV. TRAINING PERSONNEL (GRP004, N=18)



Ninety-one percent of the respondents in the sample were found to perform jobs within the groups listed above. The remaining nine percent (28 respondents) did not meaningfully group together. This nine percent included seven AFS 326X5A, six AFS 326X5B, and 15 32675 personnel. Some of the job titles given by respondents which were representative of these personnel included mobility NCO, special assistant to the maintenance supervisor, maintenance training NCO, Quality Control Inspector, and DIFM monitor.

### Group Descriptions

The following paragraphs contain brief job descriptions of the clusters, job types, and independent job type identified through the job structure analysis. Selected background and job satisfaction data are provided for these groups on Table 4. Representative tasks for all clusters and independent job types are presented in Appendix A along with background data for the job type groups.

I. F/FB-111 MANUAL TEST STATION SHOP PERSONNEL CLUSTER (GRP011, N=108). Personnel in this group account for approximately 85 percent of all AFS 326X5A respondents in this survey. Group members are assigned to various commands, USAFE (38 percent), SAC (34 percent), and TAC (28 percent). Over half of the cluster (57 percent) indicated being in their first enlistment. In addition to general maintenance functions previously discussed, the technical tasks listed below are the most commonly performed by cluster respondents:

- perform periodic inspections of test equipment
- align, benchcheck, or isolate malfunctions in F/FB-111 anticollision lights
- research microfiche for part information
- benchcheck F/FB-111 Central Air Data computers
- benchcheck F/FB-111 maximum safe mach assemblies
- isolate malfunctions in F/FB-111 maximum safe mach assemblies to SRUs or chassis
- benchcheck F/FB-111 fuel quantity intermediate devices
- benchcheck F/FB-111 ARC-164 UHF receiver transmitters

Tasks listed above are only a few of those most commonly performed; overall 191 tasks are performed by 50 percent or more of the cluster incumbents. The high number of commonly performed tasks and the natural clustering of AFS 326X5A respondents indicates a function distinct from other survey respondents. Several Avionics AGE test stations, or test equipment groups, are utilized by a majority of the cluster respondents including systems, such as Central Air Data Computers (12A1803A1), Communications and Navigational Aids Test Stations (12A16850), Identification-Friend-or-Foe (IFF) Mode IV Computer Test Equipment Groups (KIR/KIT), IFF Test Equipment Groups (AN/APX-64 Hot Mock-Ups), Radar Test Sets AN/UPM-137, Instrument Landing System (ILS) Test Sets, and Ultra High Frequency (UHF) Test Equipment Groups (AN/ARC-164 Hot Mock-Ups). Although all cluster respondents indicated working in a manual test station shop, seven variations in the job performed by cluster members are identifiable.

Job types are distinguished by the emphasis group members place on the maintenance of particular system(s), such as TACAN, AAI, SATCOM, Mission and Traffic Control and CADC systems or general test station maintenance. Background information and job satisfaction data for each of the job type groups within the cluster is presented on Tables A1 and A2 in Appendix A.

Tactical Air Navigation (TACAN) Maintenance Personnel (GRP093) are assigned to SAC units and work on FB-111A aircraft. Most group members (63 percent) are in their first enlistment. Tasks related to maintaining Central Air Data Computer test stations take up most of the groups time, which is also characterized by the maintenance of TACAN (AN/ARN-84) or IFF Mode IV computer test equipment groups:

- isolate malfunctions in F/FB-111 ARN-84 TACAN system receiver transmitters to SRUs or chassis
- benchcheck F/FB-111 ARN-84 TACAN radio set controls or system receiver transmitters
- remove or replace F/FB-111 Mode IV computer SRUs
- remove or replace F/FB-111 ARN-84 TACAN system receiver transmitter SRUs
- isolate malfunctions in F/FB-111 Mode IV computers to SRU or chassis
- benchcheck F/FB-111 Mode IV computers

Most respondents (63 percent) also indicated maintaining only one set of test stations, and could work either days or swing shifts. In addition to the TACAN (AN/ARN-84 Hot Mock-up) test equipment group, test sets used by group members include Radar Test sets AN/UPM-137, Mission and Traffic Control Test Stations (12A16879), Satellite Communications Test Stations, and Signal Data Converter Test Stations.

Assigned overseas in TAC units working on F-111D aircraft are Air-to-Air (AAI) System Maintenance Personnel (GRP116). Five of the six group members are in their first enlistment. Tasks distinguishing group members focus on maintenance of APX-76 Air-to-Air Interrogator (AAI) equipment:

- isolate malfunctions on F/FB-111 APX-76 AAI receiver transmitters to SRU, chassis or bit and piece
- align or benchcheck F/FB-111 APX-76 AAI-76 switch amplifiers
- align or benchcheck F/FB-111 APX-76 AAI-76 AAI synchronizers
- remove or replace F/FB-111 APX-76 AAI receiver transmitter bits and pieces
- align F/FB-111 APX-76 AAI receiver transmitters

In addition to the Air-to-Air Interrogator Test Equipment (AN/APX-76 Hot Mock-ups), used by these job type members, the Mission and Traffic Control Test Station (12A16849), and Electrical Test Station (12A3409) are also utilized. Group respondents indicated working various shifts (day, swing, midnight), and maintain three or four sets of test stations.

Also assigned overseas, Mission and Traffic Control (ARC-123) Personnel (GRP102) are assigned primarily in USAFE and work on F-111F or F-111E aircraft. The test stations used by members in this job type include Mission and Traffic Control Test Stations (12A16849), Emergency Radio Test Equipment Groups (AN/URM-95A), Electrical Test Stations (12A3409), Signal Data Converter Test Stations, and TACAN Test Equipment Groups (AN/ARN-84 Hot Mock-ups). Overall, group members indicated maintaining three sets of test stations. Tasks representative of the job type are:

- isolate malfunctions in F/FB-111 ARC-123 HF receiver transmitters, HF amplifier power supplies, HF antenna couplers, HF radio set controls to bit and piece
- isolate malfunctions in F/FB-111 HF antenna couplers to SRU or chassis
- remove or replace F/FB-111 ARC-123 HF receiver transmitters, HF amplifier power supplies, or HF radio set control bits and pieces
- remove or replace F/FB-111 ARC-123 HF radio set control SRUs

Respondents perceive their talents and training as utilized fairly well or better.

The CONUS counterpart of the above job type, Mission and Traffic Control (ARC-112) Personnel (GRP091), do not perceive their talents and training as being as well utilized. These TAC respondents are assigned to units maintaining F-111A. Group members are distinguished by the maintenance of ARC-112 high frequency (HF) equipment. Nine of the 13 group members are in their first enlistment. Incumbents indicated maintaining four sets of test stations versus three for ARC-123 HF personnel. Both Mission and Traffic Control Personnel job type groups tend to use the same avionics AGE test stations and equipment. The primary difference is that ARC-112 HF personnel use the TACAN (AN/ARN-118 Hot Mock-up) Test Equipment Group and ARC-123 HF personnel use the AN/ARN-84 Hot Mock-up. Distinguishing tasks performed by job type members include:

- align or benchcheck F/FB-111 ARC-112 HF receiver transmitters
- align or benchcheck F/FB-111 ARC-112 HF amplifier power supplies
- isolate malfunctions in F/FB-111 ARC-112 HF receiver transmitters to SRUs, chassis or bit and piece
- isolate malfunctions in F/FB-111 ARC-112 HF amplifier power supplies to SRUs, chassis or bit and piece
- benchcheck F/FB-111 ARC-112 radio set controls
- remove or replace F/FB-111 ARC-112 HF receiver transmitter bits and pieces.

Another job type distinguished by unique equipment is the Satellite Communications (SATCOM) Maintenance Personnel (GRP081) group. All nine members of this group are in their first enlistment, assigned to SAC, and work on FB-111A or F-111A aircraft. Unique also are the high job satisfaction responses, with 100 percent of the group feeling their job is interesting, and perceiving their talents and training as well utilized. Tasks such as those listed below characterize this job type:

- align or benchcheck FB-111 SATCOM printers
- benchcheck FB-111 ARC-171 radio set controls, receiver transmitters, or SATCOM controls
- remove or replace FB-111 SATCOM control SRUs
- isolate malfunctions in FB-111 SATCOM input/output control logic power supplies to SRU or chassis
- isolate malfunctions in FB-111 SATCOM teleprinters to SRU or chassis
- isolate malfunctions in FB-111 ARC-171 receiver transmitters to SRU or chassis
- remove or replace FB-111 ARC-171 receiver transmitter SRUs

In addition, respondents indicated working primarily a day shift and maintaining one set of test stations. Test stations used by members of this include Satellite Communications Test Stations, Mission and Traffic Control Test Stations (12A16879), and TACAN Test Equipment Groups (AN/ARN-84 Hot Mock-ups).

Central Air Data Computer (12A1831) Test Station Maintenance Personnel (GRP058) also work on F-111A or FB-111A aircraft. Like the previous job type, these respondents are assigned primarily in SAC (71 percent); the remaining group members are in USAFE (29 percent). These respondents perform the maintenance on CADC test stations not performed by the TACAN Maintenance personnel previously discussed. Distinctive tasks performed by these respondents involve:

- transfer data from F/FB-111 flight recorder 30-track tape magazines to 7-track tapes
- isolate malfunctions in F/FB-111 12A1803A1 test station digital comparators to SRU or chassis
- isolate malfunctions in F/FB-111 12A1803A1 test station angle position indicators to SRU chassis
- isolate malfunctions in F/FB-111 12A1803A1 test station dual power supplies to bit and piece
- safety wire F/FB-111 central air data computer SRUs
- remove or replace F/FB-111 12A1803A1 test station automatic control panel bits and pieces
- remove or replace F/FB-111 12A1803A1 test station digital comparator SRUs

Respondents in this group indicated maintaining one set of test stations, and work various shifts, such as days, swings, or midnight. Three people in this group retrained from the 326X0A specialty and the remaining four people are in their first enlistment. All group members perceived their talents and training to be well utilized.

Having the most limited job within the cluster are F/FB-111 General Test Station Maintenance Personnel (GRP037). All seven group members are in their first enlistment and are distributed throughout SAC and USAFE working on F-111D/E and FB-111A aircraft. As is characteristic of jobs performed by the most inexperienced personnel in a specialty, these respondents perform the smallest average number of tasks, 42 less than any other job type within the cluster. Tasks performed concentrate on general LRU maintenance, many of which are performed by all groups in the cluster. Group respondents did, however, also report performing maintenance of simulators or mock-ups:

- perform corrosion control of F/FB-111 simulators or mock-ups
- perform confidence checks of F/FB-111 simulators or mock-ups
- perform periodic inspections of F/FB-111 simulators or mock-ups
- remove or replace F/FB-111 simulator or mock-up light bulbs, fuses or minor hardware
- place test equipment in storage areas
- benchcheck F/FB-111 oil pressure indicators

Respondents indicated working day or swing shifts and maintaining one to three sets of test stations. Only one of the seven group members intends to reenlist, although most group members find their job interesting.

II. F-15 MANUAL TEST STATION SHOP PERSONNEL CLUSTER (GRP044, N=122). Like the F/FB-111 Manual Test Station Cluster personnel, respondents in this cluster maintain manual test stations. Characteristic of this cluster are tasks typical of test station maintenance personnel and those tasks which are unique to F-15 aircraft systems. The cluster represents 90 percent of all AFS 326X5B personnel in the survey, indicating a homogeneous job structure within the 326X5B specialty. Further illustrating this point is the fact that only two job groups were identifiable within the cluster. The most common technical tasks relate to the maintenance of equipment using the AN/GSM-229 or AN/GSM-230 test stations. Representative tasks are:

- align, assemble, disassemble or benchcheck F-15 radar system antennas
- isolate malfunctions in F-15 radar system antennas
- align or benchcheck F-15 radar system low voltage power supplies
- align or benchcheck F-15 radar system transmitters
- benchcheck F-15 radar system low voltage power supplies
- isolate malfunctions in F-15 radar system transmitters
- align or benchcheck F-15 integrated or main communications control panels
- isolate malfunctions in F-15 integrated communications control panels
- isolate malfunctions in F-15 radar system low voltage power supplies
- isolate malfunctions in F-15 APX-76 radio-receiver transmitters
- benchcheck or align F-15 APX-76 radio-receiver transmitters
- isolate malfunctions in F-15 motion picture cameras

In addition, incumbents maintain APX-101 radio receiver transmitters, controller aircraft grip assemblies, generator control units, or fuel quantity indicators. These tasks are only representative samples of the tasks and responsibilities of the cluster. Overall, group members perform an average of 142 tasks. Various Avionics AGE test stations or test equipment groups used by incumbents include: Antenna A or B (AN/GSM-228) Test Stations; Communications, Navigation, and Identification Test Stations (AN/GSM-230), Emergency Radio Test Equipment Groups (AN/URM-95A); Identification-Friend-or-Foe (IFF) Mode IV Computer Test Equipment Groups (KIR/KIT), Indicators and Controls Test Stations (AN/GSM-229), Instrument Landing System (ILS) Test Sets and Radar Test Sets (AN/UPM-137). Most respondents indicated maintaining two sets of test stations. Group members are assigned primarily to TAC (53 percent), with the remaining personnel in USAFE (26 percent), PACAF (17 percent), and ATC (four percent).

- perform corrosion control of F/FB-111 simulators or mock-ups
- perform confidence checks of F/FB-111 simulators or mock-ups
- perform periodic inspections of F/FB-111 simulators or mock-ups
- remove or replace F/FB-111 simulator or mock-up light bulbs, fuses or minor hardware
- place test equipment in storage areas
- benchcheck F/FB-111 oil pressure indicators

Respondents indicated working day or swing shifts and maintaining one to three sets of test stations. Only one of the seven group members intends to reenlist, although most group members find their job interesting.

II. F-15 MANUAL TEST STATION SHOP PERSONNEL CLUSTER (GRP044, N=122). Like the F/FB-111 Manual Test Station Cluster personnel, respondents in this cluster maintain manual test stations. Characteristic of this cluster are tasks typical of test station maintenance personnel and those tasks which are unique to F-15 aircraft systems. The cluster represents 90 percent of all AFS 326X5B personnel in the survey, indicating a homogeneous job structure within the 326X5B specialty. Further illustrating this point is the fact that only two job groups were identifiable within the cluster. The most common technical tasks relate to the maintenance of equipment using the AN/GSM-229 or AN/GSM-230 test stations. Representative tasks are:

- align, assemble, disassemble or benchcheck F-15 radar system antennas
- isolate malfunctions in F-15 radar system antennas
- align or benchcheck F-15 radar system low voltage power supplies
- align or benchcheck F-15 radar system transmitters
- benchcheck F-15 radar system low voltage power supplies
- isolate malfunctions in F-15 radar system transmitters
- align or benchcheck F-15 integrated or main communications control panels
- isolate malfunctions in F-15 integrated communications control panels
- isolate malfunctions in F-15 radar system low voltage power supplies
- isolate malfunctions in F-15 APX-76 radio-receiver transmitters
- benchcheck or align F-15 APX-76 radio-receiver transmitters
- isolate malfunctions in F-15 motion picture cameras

In addition, incumbents maintain APX-101 radio receiver transmitters, controller aircraft grip assemblies, generator control units, or fuel quantity indicators. These tasks are only representative samples of the tasks and responsibilities of the cluster. Overall, group members perform an average of 142 tasks. Various Avionics AGE test stations or test equipment groups used by incumbents include: Antenna A or B (AN/GSM-228) Test Stations; Communications, Navigation, and Identification Test Stations (AN/GSM-230), Emergency Radio Test Equipment Groups (AN/URM-95A); Identification-Friend-or-Foe (IFF) Mode IV Computer Test Equipment Groups (KIR/KIT), Indicators and Controls Test Stations (AN/GSM-229), Instrument Landing System (ILS) Test Sets and Radar Test Sets (AN/UPM-137). Most respondents indicated maintaining two sets of test stations. Group members are assigned primarily to TAC (53 percent), with the remaining personnel in USAFE (26 percent), PACAF (17 percent), and ATC (four percent).

Two job types are identifiable within the cluster, distinguished by experience and supervisory responsibilities:

- a. F-15 Manual Test Station Shop Shift Supervisors (GRP062, N=5)
- b. F-15 Manual Test Station Operators-Maintainers (GRP061, N=114)

The more experienced job type, Shift Supervisors (GRP062), perform technical tasks while taking on substantial supervisory responsibilities. Tasks distinguishing these E-5 or E-6 personnel are:

- evaluate individuals for promotion, demotion, or reclassification
- maintain precision measurement equipment (PME) calibration schedules
- prepare APR's
- evaluate individuals for recognition
- review maintenance data collection records forms (AFTO 349) for accuracy
- supervise integrated avionics manual test station and component specialists (F-15) (AFSC 32655B)

Respondents indicated working on various models of the F-15 aircraft. All five group members indicated plans to reenlist.

The Operators-Maintainers (GRP061), however, are not as satisfied with their job (see Table A3 in Appendix A) and only 39 percent intend to reenlist. Technical tasks relating to the maintenance of indicators and controls assigned to the AN/GSM-229 test station are performed more by members of this job type. Representative tasks include:

- benchcheck F-15 built-in-test control/display panels
- benchcheck F-15 altitude indicators
- benchcheck F-15 controller aircraft grip assemblies
- benchcheck avionics status panels
- benchcheck F-15 angle-of-attack transmitters
- benchcheck F-15 mach speed indicators

These tasks are only a few of the average 146 tasks performed by group members, 49 more than the shift supervisors. It is unusual for supervisory job group respondents to perform fewer tasks than subordinates. Sixty percent of the Shift Supervisors, however, retrained from AFSCs outside the 326XX career field.

III. MANAGEMENT PERSONNEL CLUSTER (GRP022, N=34). Clustering on the basis of management and supervisory responsibilities, these incumbents have an average of 17 years in the service. All group members supervise AFS 326X5 personnel. The broad nature of management level positions makes any specific description difficult. Tasks such as those listed below are the most commonly performed by cluster incumbents:

- interpret policies, directives, or procedures for subordinates
- determine work priorities
- counsel personnel on personal or military related matters
- write correspondence
- prepare or endorse APR's
- evaluate individuals for recognition
- evaluate compliance with performance standards
- certify status of reparable, servicable, or condemned parts

Most respondents (62 percent) indicated retraining from another specialty.

Two job types are identifiable within the cluster:

- a. F/FB-111 Manual Test Station Shop Shift Supervisors  
(GRP059, N=8)
- b. Manual Test Station Shop Chiefs (GRP063, N=15)

Background information for these two job types is presented on Table A4 in the Appendix. Unlike the F-15 Shift Supervisors who grouped within the cluster of shop personnel, the F/FB-111 Manual Test Station Shop Shift Supervisors (GRP059) performed management related tasks more than technical tasks. Incumbents indicated 47 percent of their time is spent in implementing, inspecting, evaluating, directing, organizing, or planning functions. F-15 Shift Supervisors only indicate spending 23 percent of their time on these functions. Technical tasks performed by F/FB-111 Shift Supervisors focus on general test station maintenance versus the F-15 Shift Supervisors who tend to perform test station specific tasks.

Manual Test Station Shop Chiefs (GRP063) are 7-skill levels with an average grade of E-6. Over 90 percent of their time is spent in supervisory, management, administrative, supply, and training functions. Distinctive tasks include:

- supervise integrated avionics manual test station and component technicians (AFSC 32675)
- participate in meetings, such as staff meetings, briefings, conferences, or workshops
- prepare replies to inspection reports
- counsel trainees on training progress
- plan work assignments
- conduct OJT

As the most experienced job type, 47 percent are eligible to retire, and 47 percent plan to reenlist. All members of this job group work a day shift.

IV. TRAINING PERSONNEL (GRP004, N=18). Included in this independent job type are instructors, course supervisors, CDC, and technical writers; each emphasizing training aspects within the specialty. Sixty-seven percent of these respondents are instructors. Tasks uniquely performed by group members include:

- conduct resident course classroom training
- write test questions
- prepare lesson plans
- demonstrate how to locate technical information
- administer or score tests
- counsel trainees on training progress
- develop training aids

Group incumbents are highly motivated (see Table 4) and most (67 percent) intend to reenlist.



### Summary

Analysis of the job structure for AFSC 326X5A, 326X5B, and 32675 incumbents supports a clear break between the AFS groups with respect to the jobs they perform. Three clusters and one independent job type were identified in the job structure analysis. Each cluster is characterized by a DAFSC; AFS 326X5A, 326X5B, or 32675. Only the Training Personnel independent job type group consisted of personnel in all skill levels. The A-shred (F/FB-111) cluster consisted of seven job types, while the B-shred (F-15) cluster consisted of only two job types. Firstline supervisory personnel in F-15 units tend to group in the technically oriented shop maintenance cluster, while F/FB-111 supervisors perform tasks more closely related to the management cluster. Personnel with a 7-skill level in both shift supervisor job types (firstline supervision) perform technical tasks. The task differences and the nature of F/FB-111 job groups versus the F-15 job groups also indicate the two specialties are performing different functions. The management cluster, dominated by senior level personnel, concentrate on managerial and supervisory functions. Only general test station, LRU, or forms maintenance were commonly performed by more than one job group. Four items of test equipment are commonly utilized; (AN/URM-95A, IFF Mode IV Computer Test Equipment, ILS Test Sets, and AN/UPM-137). The same diverse characteristic of the 326X5A cluster holds true for the test equipment they utilize.

TABLE 4

## BACKGROUND INFORMATION FOR MAJOR JOB STRUCTURE GROUPS

	<u>F/FB-111</u> <u>MANUAL TEST</u> <u>STATION SHOP</u>	<u>F-15</u> <u>MANUAL TEST</u> <u>STATION SHOP</u>	<u>MANAGEMENT</u> <u>PERSONNEL</u>	<u>TRAINING</u> <u>PERSONNEL</u>
NUMBER IN GROUP:	108	122	34	18
PERCENT OF SAMPLE:	35%	39%	11%	6%
PERCENT LOCATED OVERSEAS:	40%	45%	47%	6%
<hr/>				
DAFSC DISTRIBUTION:				
32635A	7%	-	-	17%
32655A	78%	-	3%	33%
32635B	-	9%	-	6%
32655B	-	79%	3%	22%
32675	15%	12%	94%	22%
<hr/>				
AVERAGE GRADE:	E-4	E-4	E-6	E-4
AVERAGE TIME IN SERVICE:	63 MOS	60 MOS	198 MOS	75 MOS
PERCENT SUPERVISING:	29%	40%	94%	28%
PERCENT IN FIRST ENLISTMENT:	57%	56%	3%	50%
AVERAGE NUMBER TASKS PERFORMED:	196	142	92	21
<hr/>				
FINDS JOB INTERESTING:	68%	56%	65%	78%
FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER:	82%	61%	71%	89%
FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER:	88%	63%	68%	94%
SATISFIED WITH SENSE OF ACCOMPLISHMENT:	61%	48%	53%	78%
PLANS TO REENLIST:	36%	40%	50%	67%

## ANALYSIS OF DAFSC GROUPS

In conjunction with identifying the job structure of the 326X5 specialties, it is important to examine differences among survey respondents with respect to each shred and their skill level progression. The shred analysis allows for the identification of similarities and differences among specialties and the skill levels within the specialty. This information is also used to evaluate how well career ladder documents, such as AFR 39-1 specialty descriptions and the Specialty Training Standards (STS), reflect the tasks and jobs which specialty incumbents perform in the field.

The DAFSC analysis of the 326X5 specialty will discuss the duties and tasks common to the skill level groups as well as the tasks which best differentiate 3-, 5-, and 7-skill level respondents. Shreds are designated at the 3- and 5-skill level for the F/FB-111 and F-15 aircraft systems respectively. Both shreds combine at the 7-skill level. The AFS 32699 and CEM Code 32900 are fed from seven separate 326XX specialties, and were not surveyed in this sample.

### DAFSC 32635A and 32655A

Three-skill and 5-skill level personnel are found in each job type in the F/FB-111 Manual Test Station Shop personnel cluster. The specific responsibilities of personnel in each skill level differ. Three-skill level respondents perform very general LRU or test station maintenance. Many of these tasks are listed on Table 5, as those tasks common to both A and B shred personnel. The 5-skill level takes on substantially more responsibility, performing an average of 172 tasks, 75 more than the 3-skill level. Equipment specific tasks along with the general test station maintenance functions are characteristic of the 5-skill level.

### DAFSC 32635B and 32655B

Unlike the A shred, the 3- and 5-skill level B-shred respondents indicate performing almost the same functions. The 5-skill level incumbents perform an average of 132 tasks, only 30 more than the 3-skill level. While both skill level group respondents perform general maintenance and equipment specific maintenance, the 5-skill level takes on some supervisory responsibility and performs more forms management functions.

### DAFSC 32675

A definite shift in responsibilities occurs at the 7-skill level. Not only do both shreds merge at the 7-skill level, but the overall job function becomes supervisory and managerial. Tasks differentiating technicians from 3- and 5-skill level respondents focus on managerial functions involving evaluating, directing, organizing, planning or implementing functions (see Table 6). Unusual at the 7-skill level is the fact that the average number of tasks performed (120) is less than the average performed by 5-skill levels. This finding is possibly due to the combining of personnel at the 7-skill level

TABLE 5

EXAMPLES OF TASKS MOST COMMONLY PERFORMED BY DAFSC  
326X5A AND 326X5B PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	AFS 326X5A	AFS 326X5B
H197 INSTALL CAPS, PLUGS, OR DUST COVERS ON TEST STATIONS, TEST EQUIPMENT OR LRU's	89	92
H226 VISUALLY INSPECT AND CLEAN TEST EQUIPMENT	83	87
H225 VISUALLY INSPECT AND CLEAN LRUs	83	87
H199 INVENTORY TEST STATIONS OR ROLLAWAYS	86	75
F160 ORDER PARTS BY TELEPHONE	79	84
H208 PERFORM PERIODIC INSPECTIONS OF TEST STATIONS	81	86
H223 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR MINOR HARDWARE	81	79
E124 ANNOTATE MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	67	71
H194 CLEAN TEST STATION BLOWER FILTERS	83	85
H207 PERFORM PERIODIC INSPECTIONS OF TEST EQUIPMENT	79	74
F167 RESEARCH MICROFICHE FOR PART INFORMATION	78	85
F166 RESEARCH MANUALS FOR PART NUMBERS	74	81
H212 PRESSURIZE LRUs	84	77
E136 ANNOTATE SIGNIFICANT HISTORICAL DATA FORMS (AFTO FORM 95)	67	65
H204 PERFORM CONFIDENCE CHECKS OF TEST STATIONS	82	89
E122 ANNOTATE ISSUE/TURN IN REQUEST FORMS (AFTO FORM 2005)	61	63
E132 ANNOTATE REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	66	70
E135 ANNOTATE SERVICEABLE TAG-MATERIAL FORMS (DD FORM 1574)	60	62
E139 ANNOTATE TECHNICAL ORDER SYSTEM PUBLICATION IMPROVEMENT REPORT AND REPLY FORMS (AFTO FORM 22)	51	57
E142 ANNOTATE UNSERVICEABLE (CONDEMNED) TAG MATERIAL FORMS (DD FORM 1577)	53	64
E143 ANNOTATE UNSERVICEABLE (REPARABLE) TAG MATERIAL FORMS (DD FORM 1577-2)	52	59
G183 PACK OR UNPACK LRUs OR SRUs FOR SHIPMENT	55	73
H196 INSPECT EQUIPMENT FOR CORRECT CALIBRATION DATES	78	62
H205 PERFORM CORROSION CONTROL OF TEST STATIONS, TEST EQUIPMENT OR LRUs	67	73
H206 PERFORM FUNCTIONAL CHECKS OR T AND I OF LRUs ISSUED FROM SUPPLY	75	72
H213 REMOVE OR REPLACE TEST REPLACEABLE UNITS (TRUs)	66	70
H222 REMOVE OR REPLACE TEST STATION CALDE ASSEMBLY PINS OR HARDWARE	73	72

TABLE 6

TASKS WHICH BEST DISTINGUISH DAFSC 32655A, 32655B, AND 32675 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	AFS		
	32655A (N=96)	32655B (N=103)	32675 (N=79)
H194 CLEAN TEST STATION BLOWER FILTERS	88	87	35
H212 PRESSURIZE LRUs	88	82	38
H204 PERFORM CONFIDENCE CHECKS OF TEST STATIONS	84	90	42
H197 INSTALL CAPS, PLUGS, OR DUST COVERS ON TEST STATIONS, TEST EQUIPMENT, OR LRUs	92	92	48
H223 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR MINOR HARDWARE	83	85	44
H205 PERFORM CORROSION CONTROL OF TEST STATIONS, TEST EQUIPMENT, OR LRUs	69	78	33
H222 REMOVE OR REPLACE TEST STATION CABLE ASSEMBLY PINS OR HARDWARE	78	79	38
H207 PERFORM PERIODIC INSPECTIONS OF TEST EQUIPMENT	82	75	38
H226 VISUALLY INSPECT AND CLEAN TEST STATIONS	86	89	48
H199 INVENTORY TEST STATIONS OR ROLLAWAYS	89	80	46
H225 VISUALLY INSPECT AND CLEAN LRUs	85	88	49
H206 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECT (T&I) OF LRUs ISSUED FROM SUPPLY	77	75	38
* * * * *	*	*	*
C57 ENDORSE AIRMAN PERFORMANCE REPORTS (APRs)	7	10	62
C80 PREPARE APRs	23	25	76
C60 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	11	8	59
C86 REVIEW TECHNICAL ORDER IMPROVEMENT REPORTS	11	9	57
B45 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	11	17	61
C83 REVIEW CORRESPONDENCE	2	8	51
C85 REVIEW MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349) FOR ACCURACY	23	28	71
B52 SUPERVISE INTEGRATED AVIONICS MANUAL TEST STATION AND COMPONENT TECHNICIANS (AFS 32675)	1	4	46
C64 EVALUATE INDIVIDUALS FOR RECOGNITION	10	10	54
A17 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	8	19	57
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED MATTERS	19	23	63
B54 WRITE CORRESPONDENCE	13	14	54

from two shreds. A 7-skill level could be assigned to an F/FB-111 or F-15 manual test station shop. Technicians appear in each of the clusters and independent job types discussed in the JOB STRUCTURE ANALYSIS, with most concentrating in the Management Cluster. In line with this, 7-skill levels work with all of the F-15 or F/FB-111 aircraft models, and utilize various Avionics AGE test equipment (see Table 7). This type of AFSC progression forces a progression from a technical job at the 3- and 5-skill level shred to a supervisory 7-skill level. The performance of technical tasks and in particular OJT, support a shred designation at the 7-skill level.

#### AFS 326X5A and 326X5B Comparisons

An overall comparison of the 326X5A and 326X5B shreds indicate both similarities and differences between the two shreds. F/FB-111 (A Shred) incumbents progress from very general tasks at the 3-skill level to technical equipment specific tasks at the 5-skill level. F-15 (B Shred) respondents, however, perform nearly the same functions at both the 3- and 5-skill level. The job groups formed by incumbents in each shred also show different trends. Eight job types are formed by AFS 326X5A personnel, while only two are formed by AFS 326X5B respondents.

A common core of tasks is performed by members of both shreds. Generally, these tasks relate to general maintenance of LRUs or test stations, and supply functions. Table 5 lists the tasks performed by 50 percent or more of the respondents from both shreds. These common tasks are rated low in difficulty and low in training emphasis by personnel in F-15 and F/FB-111 units. On the other hand, tasks which best differentiate the shreds are more specific in nature and rated more difficult to learn and higher in training emphasis. Tasks which best illustrate the difference between specialties are shown on Table 8. As expected, A-shred respondents concentrate on F/FB-111 tasks and B-shred respondents concentrate on F-15 tasks.

TABLE 7

BACKGROUND INFORMATION DISTINGUISHING  
AFS 326X5A, 326X5B, AND 32675 RESPONDENTS  
(PERCENT MEMBERS RESPONDING)

<u>AIRCRAFT WORKED WITH:</u>	<u>AFS 326X5A</u>	<u>AFS 326X5B</u>	<u>AFS 32675</u>
F-15A	2	81	38
F-15B	2	77	32
F-15C	2	59	32
F-15D	2	52	30
 F-111A	 17	 -	 10
F-111D	17	-	11
F-111E	14	-	10
F-111F	19	-	20
FB-111A	31	-	15
 <u>AVIONICS AGE TEST EQUIPMENT UTILIZED:</u>			
 AIR-TO-AIR INTERROGATOR TEST EQUIPMENT GROUPS			
(AN/APX-76 HOT MOCK-UPS)	22	16	11
CENTRAL AIR DATA COMPUTERS (12A1803A1)	92	-	37
COMMUNICATIONS AND NAVIGATIONAL AIDS TEST			
STATION (12A16850)	84	4	34
ELECTRICAL TEST STATIONS (12A3409)	60	-	28
ELECTRICAL TEST STATIONS (12A3439)	28	-	15
IDENTIFICATION-FRIEND-OR-FOE (IFF) TEST			
EQUIPMENT GROUPS (AN/APX-64)	81	9	34
MISSION & TRAFFIC CONTROL TEST STATIONS (12A16849)	57	-	27
MISSION & TRAFFIC CONTROL TEST STATIONS (12A16879)	36	-	13
SATELLITE COMMUNICATIONS TEST STATIONS	21	-	6
SIGNAL/DATA CONVERTER TEST STATIONS	31	-	17
TACAN TEST EQUIPMENT GROUPS (AN/ARN-84)	39	10	24
TACAN TEST EQUIPMENT GROUPS (AN/ARN-118)	45	8	18
UHF TEST EQUIPMENT GROUPS (AN/ARC-164)	82	12	41
EMERGENCY RADIO TEST EQUIPMENT GROUPS (AN/URM-95A)	52	59	58
IFF MODE IV COMPUTER TEST EQUIPMENT GROUPS (KIR/KIT)	74	48	63
ILS TEST SETS	64	81	67
RADAR TEST SETS AN/UPM-137	61	86	71
ANTENNA A OR B TEST STATIONS (AN/GSM-228)	-	95	41
COMMUNICATIONS, NAVIGATION, & IDENTIFICATION TEST			
STATIONS (AN/GSM-230)	4	95	43
INDICATORS AND CONTROLS TEST STATIONS (AN/GMS-229)	2	94	42

TABLE 8

EXAMPLES OF TASKS WHICH BEST DISTINGUISH DAFSC 326X5A AND 326X5B PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS											AFS 326X5A (N=109)	AFS 326X5B (N=118)	DIFFERENCE
M390	BENCHCHECK F/FB-111 CENTRAL AIR DATA COMPUTERS										80	0	+80
P538	BENCHCHECK F/FB-111 ANTICOLLISION LIGHTS										78	0	+78
P557	ISOLATE MALFUNCTIONS IN F/FB-111 ANTICOLLISION LIGHTS										77	0	+77
K272	BENCHCHECK F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS										76	0	+76
M393	BENCHCHECK F/FB-111 MAXIMUM SAFE MACH ASSEMBLIES										75	0	+75
P527	ALIGN F/FB-111 ANTICOLLISION LIGHTS										75	0	+75
K271	BENCHCHECK F/FB-111 ARC-164 RADIO SET CONTROLS										73	0	+73
M404	ISOLATE MALFUNCTIONS IN F/FB-111 MAXIMUM SAFE MACH ASSEMBLIES TO SRU OR CHASSIS										73	0	+73
L311	BENCHCHECK F/FB-111 HF ANTENNA COUPLERS										70	0	+70
M399	ISOLATE MALFUNCTIONS IN F/FB-111 CENTRAL AIR DATA COMPUTERS TO SRU OR CHASSIS										70	0	+70
M422	REMOVE OR REPLACE F/FB-111 CENTRAL AIR DATA COMPUTER SRUs										70	0	+70
M426	REMOVE OR REPLACE F/FB-111 MAXIMUM SAFE MACH ASSEMBLY SRUs										70	0	+70
	* * * * *										*	*	*
R649	BENCHCHECK F-15 RADAR SYSTEM TRANSMITTERS										0	91	-91
R647	BENCHCHECK F-15 RADAR SYSTEM ANTENNAS										0	91	-91
T712	BENCHCHECK F-15 FUEL QUANTITY INDICATORS										0	90	-90
S679	BENCHCHECK F-15 ILS TEST SETS										0	90	-90
R648	BENCHCHECK F-15 RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES										0	90	-90
T721	BENCHCHECK F-15 MAIN COMMUNICATIONS CONTROL PANELS										0	89	-89
T715	BENCHCHECK F-15 INTEGRATED COMMUNICATIONS CONTROL PANELS										0	89	-89
R653	ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM TRANSMITTERS										0	89	-89
R651	ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM ANTENNAS										0	89	-89
T746	ISOLATE MALFUNCTIONS IN F-15 INTEGRATED COMMUNICATIONS CONTROL PANELS										0	88	-88
T705	BENCHCHECK F-15 CAUTION LIGHT LOGIC UNITS										0	88	-88
R652	ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES										0	88	-88



## COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

In order to insure accuracy and possibly update the 326X5 AFR 39-1 Specialty Descriptions, occupational survey data were compared against the April 1979 descriptions for DAFSCs 32635/55 and 32675. These descriptions are intended to give a broad overview of the duties and tasks required to be performed by various skill level personnel.

The various actions performed by AFS 32635/55 personnel mentioned in the Specialty Description are accurate representations of the types of tasks most respondents indicated performing. Several tasks relating to the annotating of forms and supply activities are performed by specialty respondents, but not mentioned in the Specialty Description. Specifically, these include annotating MDC record forms - AFTO Form 349 (70 percent), reparable item processing tag forms - AFTO Form 350 (69 percent), significant historical data forms - AFTO Form 95 (67 percent), issue/turn in request forms - AF Form 2005 (62 percent), and serviceable tag-materiel forms - DD Form 1574 (61 percent). Supply activities involve researching microfiche for part information (81 percent), ordering parts by telephone (81 percent), and researching manuals for part numbers (77 percent).

Description items in paragraph f, "Supervises integrated avionics manual test station and component specialists," are typically performed by 35 to 55 percent of the respondents. For example, conducting OJT is performed by 32 percent of 5-skill level and 56 percent of the 7-skill level incumbents. These task statements are more descriptive of the 7-skill level incumbent. While 7-skill levels do perform technical tasks, a majority of their time (59 percent) is spent on supervisory, managerial, administrative, supply, and forms duties. The specialty description AFS 32675 emphasizes the technical aspects of the specialty. If the specialty shredouts (A&B) are extended to the 7-skill level, then the present emphasis in the 7-skill level specialty description on technical areas may eventually prove to be accurate. If the shredouts are not approved, it may be more appropriate to put greater emphasis on the supervisory and managerial aspects in the 7-skill level description.

## ANALYSIS OF MAJOR COMMAND DIFFERENCES

Another dimension along which the jobs performed by individuals are described is major command (MAJCOM). The job structure analysis revealed several jobs dominated by personnel in specific commands. As a result, a discussion of the tasks and duties performed by incumbents according to MAJCOM illustrates the jobs performed from the perspective of MAJCOM differences. Five major commands, comprising 89 percent of the sample, were examined. These major commands are: (1) Air Training Command (ATC); (2) Strategic Air Command (SAC); (3) Tactical Air Command (TAC); (4) United States Air Force Europe (USAFE); and (5) Pacific Air Forces (PACAF). Seven-skill level personnel are found in each of these commands. However, AFS 326X5A personnel are in ATC, SAC, TAC, and USAFE, while AFS 326X5B personnel are in ATC, TAC, USAFE and PACAF. Personnel in ATC are responsible for the training of AFS 326X5 personnel, and do not serve in an operational capacity. The discussions below will concentrate on the operational commands.

### AFS 326X5A

Job type groups within the F/FB-111 Manual Test Station Shop personnel are dominated by MAJCOM. USAFE respondents are in the ARC-123 Mission and Traffic Control Maintenance job type; SAC respondents in the TACAN, SATCOM, or CADC Maintenance job types; and TAC respondents in the AAI or ARC-112 Mission and Traffic Control Maintenance job types. Distinguishing tasks among MAJCOMs (presented in Table 9), validate these job type groupings. Several background differences also appear between MAJCOMs, including the number of test sets utilized, aircraft worked with and Avionics AGE utilized. As may be seen on Table 10, TAC and USAFE are most alike in the Avionics AGE utilized. Even with the pronounced differences between MAJCOMs, no substantive differences could be found in job satisfaction responses (see Table 11). Overall, the differences between MAJCOM or job type groups revolve around the model(s) of aircraft maintained.

### AFS 326X5B

As illustrated on Table 12, only minor task differences appear between the operational commands utilizing B-shred respondents. The homogeneous nature of AFS 326X5B personnel displayed in the JOB STRUCTURE ANALYSIS section holds true between MAJCOMs.

The B-shred personnel in PACAF have higher job satisfaction responses than other MAJCOM respondents. Otherwise, all MAJCOM respondents generally share the same background characteristics (i.e., average number of tasks performed, average time in service, average grade, or test equipment utilized). An exception to this are PACAF respondents who do not utilize the Emergency Radio Test Equipment group (AN/URM-95A).

TABLE 9

TASKS BEST DISTINGUISHING AFS 326X5A MAJCOM GROUPS  
(PERCENT MEMBERS PERFORMING)

TASK	MAJCOM		
	SAC	TAC	USAFE
F164 PREPARE MATERIAL DEFICIENCY REPORTS	49	34	69
F165 PREPARE QUALITY DEFICIENCY REPORTS	51	25	34
G186 PREPARE AND PACK AVIONICS AND SUPPORT EQUIPMENT FOR MOBILITY OPERATIONS	0	69	3
H190 ALIGN EMERGENCY RADIOS	8	69	47
L356 REMOVE OR REPLACE F/FB-111 ARC-112 HF RECEIVER TRANSMITTER BITS AND PIECES	0	34	3
L317 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-112 HF AMPLIFIER POWER SUPPLIES TO SRU OR CHASSIS	5	44	3
M395 BENCHCHECK F/FB-111 SUBSYSTEM TIE-IN TEST SETS	8	56	31
M433 REMOVE OR REPLACE F/FB-111 12A1803A1 TEST STATION ANGLE POSITION INDICATOR BITS AND PIECES	22	50	38
O506 BENCHCHECK F/FB-111 ARN-118 TACAN RECEIVER TRANSMITTERS	3	75	38
Q625 REMOVE OR REPLACE FB-111 ARC-171 RECEIVER TRANS- MITTER SRU's	30	0	0
Q602 ISOLATE MALFUNCTIONS IN FB-111 ARC-171 RECEIVER TRANSMITTERS TO SRU OR CHASSIS	30	3	0
Q590 BEHCNCHECK FB-111 ARC-171 RECEIVER TRANSMITTERS	32	3	0
N494 REMOVE OR REPLACE F/FB-111 MODE IV COMPUTER SRU's	51	25	38
J264 REMOVE OR REPLACE F/FB-111 ARC-109 UHF RECEIVER TRANSMITTER SRU's	73	41	25
J250 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-109 UHF RADIO SET CONTROL LRU's TO BIT AND PIECE	70	41	28
J242 BENCHCHECK F/FB-111 ARC-109 UHF RADIO SET CONTROL LRU's	81	41	41
I234 REMOVE OR REPLACE F/FB-111 SIMULATOR OR MOCKUP CABLE ASSEMBLY PINS OR HARDWARE	38	28	59
K277 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 UHF RADIO SET CONTROLS TO BIT AND PIECE	32	31	59
L291 ALIGN F/FB-111 ARC-123 HF RADIO SET CONTROL	51	44	88
L328 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF MOUNTS TO BIT AND PIECE	49	34	81
L359 REMOVE OR REPLACE F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLY BITS AND PIECES	43	44	69
M405 ISOLATE MALFUNCTIONS IN F/FB-111 MAXIMUM SAFE MACH ASSEMBLIES TO BIT AND PIECE	43	59	84
M394 BENCHCHECK F/FB-111 STANDBY ALTIMETERS	46	44	69

TABLE 10  
EQUIPMENT DIFFERENCES BETWEEN MAJCOMs UTILIZING  
AFS 326X5A PERSONNEL  
(PERCENT MEMBERS RESPONDING)

	MAJCOM		
	SAC	TAC	USAFE
<u>AIRCRAFT WORKED WITH:</u>			
F-111A	5	44	9
F-111D	5	50	-
F-111E	-	16	31
F-111F	5	3	56
FB-111A	81	3	6
<u>NUMBER OF SETS OF TEST STATIONS IN SHOP:</u>			
NONE	16	3	-
ONE	73	3	-
TWO	-	3	6
THREE	-	34	75
FOUR	8	56	22
<u>AVIONICS AGE TEST EQUIPMENT UTILIZED:</u>			
AIR-TO-AIR INTERROGATOR TEST EQUIPMENT GROUP (AN/APX-76 HOT MOCK-UP)	-	53	3
CENTRAL AIR DATA COMPUTERS (12A1803A1)	78	97	100
COMMUNICATIONS, AND NAVIGATIONAL AIDS TEST STATION (12A16850)	76	88	88
ELECTRICAL TEST STATIONS (12A3409)	8	94	100
ELECTRICAL TEST STATIONS (12A3439)	81	3	-
EMERGENCY RADIO TEST EQUIPMENT GROUP (AN/URM-95A)	3	88	88
IDENTIFICATION-FRIEND-OR-FOE (IFF) MODE IV COMPUTER TEST EQUIPMENT GROUPS (KIR/KIT)	78	72	91
IDENTIFICATION-FRIEND-OR-FOE (IFF) TEST EQUIPMENT GROUPS (AN/APX-64 HOT MOCKUPS)	70	88	88
INSTRUMENT LANDING SYSTEM TEST SETS	62	78	69
MISSION & TRAFFIC CONTROL TEST STATIONS (12A16849)	3	94	97
MISSION & TRAFFIC CONTROL TEST STATIONS (12A16879)	78	6	-
RADAR TEST SETS AN/UPM-137	57	59	69
SATELLITE COMMUNICATIONS TEST STATIONS	62	-	-
SIGNAL DATA CONVERTER TEST STATIONS	27	38	38
TACAN TEST EQUIPMENT GROUPS (AN/ARN-81)	51	16	56
TACAN TEST EQUIPMENT GROUPS (AN/ARN-118)	5	78	44
UHF TEST EQUIPMENT GROUPS (AN/ARC-164)	78	84	94

TABLE 11

JOB SATISFACTION INFORMATION ACCORDING TO MAJOR COMMAND  
(PERCENT MEMBERS RESPONDING)

	<u>FINDS JOB INTERESTING</u>	<u>FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER</u>	<u>FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER</u>	<u>SATISFIED SENSE OF ACCOMPLISHMENT</u>	<u>PLANS TO REENLIST</u>
<u>AFS 32675</u>					
ATC	67	67	67	67	83
TAC	54	67	62	54	42
SAC	86	86	71	57	72
PACAF	57	100	100	60	80
USAFE	80	65	62	49	57
<u>AFS 326XSA</u>					
ATC	75	87	87	75	38
TAC	69	78	87	56	34
SAC	68	81	81	75	35
USAFE	59	81	87	63	34
<u>AFS 326XSB</u>					
ATC	90	80	90	80	50
TAC	55	55	57	42	31
USAFE	50	65	65	54	38
PACAF	77	71	82	65	59

TABLE 12  
TASKS BEST DISTINGUISHING AFS 326X5B MAJCOM GROUPS  
(PERCENT MEMBERS PERFORMING)

TASKS	MAJCOM		
	TAC	USAFE	PACAF
H190 ALIGN EMERGENCY RADIOS	42	69	18
H218 REMOVE OR REPLACE F-15 TRU SRU's	48	38	65
S660 ALIGN F-15 ARC-109 UHF RADIO RECEIVERS	77	69	35
S671 BENCHCHECK F-15 ARC-109 UHF RADIO-RECEIVER TRANSMITTERS	83	73	35
S673 BENCHCHECK F-15 ARN-118 DIGITAL-TO-DIGITAL ADAPTER CONVERTERS	37	54	71
S675 BENCHCHECK F-15 ARN-84 TACAN RADIO-RECEIVER TRANSMITTERS	54	50	35
S676 BENCHCHECK F-15 ADF ANTENNAS	62	65	47
S684 ISOLATE MALFUNCTIONS IN F-15 ARC-109 UHF RADIO- RECEIVER TRANSMITTERS	83	77	35
S663 ALIGN F-15 ARN-118 TACAN RADIO-RECEIVER TRANSMITTERS	42	81	94
S672 BENCHCHECK F-15 ARC-164 UHF RADIO-RECEIVER TRANSMITTERS	55	92	76
S686 ISOLATE MALFUNCTIONS IN F-15 ARC-118 TACAN RADIO-RECEIVER TRANSMITTERS	48	81	88
T731 BENCHCHECK F-15 PRESSURE TRANSMITTERS	58	46	82
T734 BENCHCHECK F-15 SIGNAL CONDITIONERS	38	46	88

#### AFS 32675

For the most part, 7-skill level personnel in all commands concentrate their time on supervisory, forms, records, administrative or supply functions. Incumbents in SAC and PACAF also performed equipment specific tasks. SAC respondents perform A-shred (F/FB-111) related tasks, especially in the maintenance of simulators or mockups, ARC-109 UHF radios, ARC-123 HF radios, 121803A1 test stations, and anticollision lights (see Table 13). In addition, these incumbents have more average time in the career field and time in their job. PACAF incumbents perform B-shred (F-15) related tasks. The homogeneous nature of B-shred jobs is also true for the 7-skill level PACAF respondents. SAC and PACAF 7-skill levels also have higher job satisfaction responses than other MAJCOM respondents (see Table 11). TAC respondents, as seen on Table 10 indicate using the most (from two to four) sets of test stations. USAFE respondents use two to three sets, PACAF uses two sets and SAC uses only one set of test stations.

In summary, the AFS 326X5A respondents show the most diversity in job function based on major command, and AFS 326X5B respondents maintain their homogeneous nature.

TABLE 13

TASKS BEST DISTINGUISHING AFS 32675 MAJOR COMMAND GROUPS  
(PERCENT MEMBERS RESPONDING)

TASK	MAJCOM			
	TAC	USAFE	SAC	PACAF
B47 SUPERVISE APPRENTICE INTEGRATED AVIONICS MANUAL TEST STATION AND COMPONENT SPECIALISTS (F/FB-111) (AFSC 32635A)	38	27	71	20
B50 SUPERVISE INTEGRATED AVIONICS MANUAL TEST STATION COMPONENT SPECIALISTS (F/FB-111) (AFSC 32655A)	38	32	71	0
B48 SUPERVISE APPRENTICE INTEGRATED AVIONICS MANUAL TEST STATION AND COMPONENT SPECIALISTS (F-15) (AFSC 32635B)	38	24	0	80
B51 SUPERVISE INTEGRATED AVIONICS MANUAL TEST STATION AND COMPONENT SPECIALISTS (F-15) (AFSC 32655B)	42	38	0	80
G174 CALIBRATE TORQUE WRENCHES	8	32	0	80
H212 PRESSURIZE LRU's	21	46	86	40
H216 REMOVE OR REPLACE F-15 CHASSIS MOUNTED LRU COMPONENTS, SUCH AS FUSES, CIRCUIT BREAKERS, OR TRANSFORMERS	8	19	0	60
H217 REMOVE OR REPLACE F-15 LRU SRU's EXCEPT RADAR SYSTEM SRU's	8	16	0	60
I231 PERFORM PERIODIC INSPECTIONS OF F/FB-111 SIMULATORS OR MOCKUPS	4	11	71	0
I234 REMOVE OR REPLACE F/FB-111 SIMULATOR OR MOCKUP CABLE ASSEMBLY PINS OR HARDWARE	4	14	71	0
J242 BENCHCHECK F/FB-111 ARC-109 UHF RADIO SET CONTROL LRU's	8	5	71	0
J243 BENCHCHECK F/FB-111 ARC-109 RECEIVER TRANSMITTERS	8	5	71	0
J264 REMOVE OR REPLACE F/FB-111 ARC-109 UHF RECEIVER TRANSMITTER SRU's	8	5	71	0
K269 ALIGN F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS	8	27	71	0
L307 BENCHCHECK F/FB-111 ARC-123 HF RADIO SET CONTROLS	4	24	57	0
L327 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF MOUNTS TO BIT AND PIECE	4	22	57	0
L352 REMOVE OR REPLACE F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLY SRU's	4	27	57	0
M390 BENCHCHECK F/FB-111 CENTRAL AIR DATA COMPUTERS	13	22	57	0
R645 ALIGN F-15 RADAR SYSTEM ANTENNAS	17	19	0	60
R656 SERVICE F-15 AN/GSM-228 TEST STATION FLUSH AND FILL UNITS	21	19	0	60
S673 BENCHCHECK F-15 ARN-118 DIGITAL-TO-DIGITAL ADAPTER CONVERTERS	8	11	0	60
S676 BENCHCHECK F-15 AUTOMATIC DIRECTION FINDING (ADF) ANTENNAS	13	11	0	60
S686 ISOLATE MALFUNCTIONS IN F-15 ARC-118 TACAN RADIO-RECEIVER TRANSMITTERS	13	16	0	60
T693 ALIGN F-15 GENERATOR CONTROL UNITS	17	14	0	60
T751 ISOLATE MALFUNCTIONS IN F-15 TAKE COMMAND CONTROL PANELS	17	19	0	60



## ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

A comparison of the tasks performed and background data for DAFSC 32655A and 32655B respondents assigned within the CONUS versus those assigned to overseas locations reveals that several differences are apparent between A shred respondents, while only minor differences appear between the B shred respondents. As indicated by the job structure and DAFSC analyses, the 32655A and 32655B specialties clearly perform different functions. Therefore, the discussion below, will concentrate on each specialty and its CONUS and overseas differences separately.

### AFS 32655A

Several background and task differences point out distinguishing characteristics of CONUS and overseas personnel. Overseas personnel are only located in USAFE. As in the MAJCOM group analysis, many of the differences are driven by the aircraft model respondents are associated with. For instance, the F-111D and FB-111A tend to be CONUS, while the F-111E and F-111F tend to be overseas. Only the F-111A is maintained by CONUS and overseas personnel (see Table 14). This finding is in line with the aircraft differences found in the job types found in the JOB STRUCTURE ANALYSIS section. CONUS respondents also tend to maintain the ARC-109 UHF, or ARC-112 HF LRUs, while overseas respondents maintain the ILS Glide Slope Marker Beacon and Localizer Receivers, or ARC-123 HF, LRUs (see Table 15). Additionally, several different pieces of test equipment are utilized (see Table 16), especially Electrical Test Stations, and TACAN Test Equipment groups.

Overseas respondents perform an average of 41 more tasks than the CONUS based respondents. As with many other specialties, AFS 32655A overseas personnel have slightly higher average time in the career field (TICF) than CONUS respondents, who average 16 months less time in the career field. In terms of the location of first-term personnel, 78 percent of the CONUS respondents and only 32 percent of the overseas respondents have 1-48 months time in service.

### AFS 32655B

Unlike the A-shred personnel, 32655B specialty respondents are not distinguished by the model of aircraft although the F-15C and F-15D are located more overseas (see Table 14). Overseas personnel utilize the ARN-118 TACAN and ARC-164 UHF Test Equipment Groups to maintain LRUs, more than CONUS based personnel. However, most of the tasks in Table 17 suggest there are only minor differences between personnel located in the CONUS and overseas. Respondents perform approximately the same average number of tasks. Overseas personnel had only seven months more average time in the career field. Duty location (overseas versus CONUS) did not appear to be a distinguishing characteristic for any of the AFS 326X5B job structure groups. Overseas respondents perceived their talents and training as utilized better than CONUS respondents, and were more satisfied with the sense of accomplishment gained from their work.

TABLE 14

AIRCRAFT DIFFERENCES BETWEEN CONUS AND  
OVERSEAS RESPONDENTS  
(PERCENT MEMBERS RESPONDING)

<u>AIRCRAFT</u>	<u>CONUS</u>	<u>OVERSEAS</u>
<u>AFS 326X5A</u>		
F-111A	24	11
FB-111A	41	4
F-111D	27	0
F-111E	6	25
F-111F	4	64
<u>AFS 326X5B</u>		
F-15A	87	77
F-15B	83	72
F-15C	40	88
F-15D	38	79

TABLE 15

TASKS WHICH BEST DISTINGUISH DAFSC 32655A CONUS AND  
OVERSEAS RESPONDENTS  
(PERCENT MEMBERS PERFORMING)

TASKS	CONUS (N=68)	OVERSEAS (N=28)	DIFFERENCE
J262 REMOVE OR REPLACE F/FB-111 ARC-109 UHF RADIO SET CONTROL LRU BITS AND PIECES	59	21	+38
J263 REMOVE OR REPLACE F/FB-111 ARC-109 UHF RECEIVER TRANSMITTER BITS AND PIECES	57	21	+36
J264 REMOVE OR REPLACE F/FB-111 ARC-109 UHF RECEIVER TRANSMITTER SRUs	57	21	+36
J252 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-109 UHF RECEIVER TRANSMITTERS TO BITS AND PIECES	53	18	+35
J250 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-109 UHF RADIO SET CONTROL LRUs TO BIT AND PIECE	56	25	+31
G186 PREPARE AND PACK AVIONICS AND SUPPORT EQUIPMENT FOR MOBILITY OPERATIONS	32	4	+28
J251 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-109 UHF RECEIVER TRANSMITTERS TO SRU OR CHASSIS	57	29	+28
J242 BENCHCHECK F/FB-111 ARC-109 UHF RADIO SET CONTROL LRUs	62	36	+26
J243 BENCHCHECK F/FB-111 ARC-109 UHF RECEIVER TRANSMITTERS	62	36	+26
J238 ALIGN F/FB-111 ARC-109 UHF RECEIVER TRANSMITTERS	57	32	+25
* * * * *			
H192 BENCHCHECK EMERGENCY RADIOS	37	79	-42
L292 ALIGN F/FB-111 ARC-123 HF RECEIVER TRANSMITTERS	47	89	-42
L308 BENCHCHECK F/FB-111 ARC-123 HF RECEIVER TRANSMITTERS	53	96	-43
L289 ALIGN F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLIES	46	89	-43
L328 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF MOUNTS TO BIT AND PIECE	41	86	-45
L326 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLIES TO BIT AND PIECE	40	86	-46
L291 ALIGN F/FB-111 ARC-123 HF RADIO SET CONTROL	46	93	-47
L290 ALIGN F/FB-111 ARC-123 HF MOUNTS	38	86	-48
L330 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF RADIO SET CONTROLS TO BIT AND PIECE	41	89	-48
G174 CALIBRATE TORQUE WRENCHES	18	75	-57

TABLE 16

AVIONICS AGE TEST STATIONS OR TEST EQUIPMENT GROUPS UTILIZED  
BY AFS 32655A CONUS AND OVERSEAS PERSONNEL  
(PERCENT MEMBERS RESPONDING)

EQUIPMENT	CONUS (N=68)	OVERSEAS (N=28)
AIR-TO-AIR INTERROGATOR TEST EQUIPMENT GROUPS (AN/APX-76 HOT MOCK-UPS)	29	4
CENTRAL AIR DATA COMPUTERS (12A1803A1)	91	100
COMMUNICATIONS AND NAVIGATIONAL AIDS TEST STATION (12A16850)	87	93
ELECTRICAL TEST STATIONS (12A3409)	44	100
ELECTRICAL TEST STATIONS (12A3439)	43	0
EMERGENCY RADIO TEST EQUIPMENT GROUPS (AN/URM-95A)	40	86
IDENTIFICATION-FRIEND-OR-FOE (IFF) MODE IV COMPUTER TEST EQUIPMENT GROUPS (KIR/KIT)	74	93
IDENTIFICATION-FRIEND-OR-FOE (IFF) TEST EQUIPMENT GROUPS AN/APX-64 HOT MOCK-UPS)	79	86
INSTRUMENT LANDING SYSTEM (ILS) TEST SETS	65	75
MISSION AND TRAFFIC CONTROL TEST STATIONS (12A16849)	43	96
MISSION AND TRAFFIC CONTROL TEST STATIONS (12A16879)	52	0
RADAR TEST SETS AN/UPM-137	62	79
SATELLITE COMMUNICATIONS TEST STATIONS	31	0
SIGNAL/DATA CONVERTER TEST STATIONS	31	36
TACTICAL AIR NAVIGATION (TACAN) TEST EQUIPMENT GROUPS (AN/ARN-84 HOT MOCK-UPS)	32	64
TACTICAL AIR NAVIGATION (TACAN) TEST EQUIPMENT GROUPS (AN/ARN-118 HOT MOCK-UPS)	44	39
ULTRA HIGH FREQUENCY (UHF) TEST EQUIPMENT GROUPS (AN/ARC-164 HOT MOCK-UPS)	79	93

TABLE 17

TASKS WHICH BEST DISTINGUISH DAFSC 32655B CONUS AND  
OVERSEAS RESPONDENTS  
(PERCENT MEMBERS PERFORMING)

TASKS	CONUS (N=60)	OVERSEAS (N=43)	DIFFERENCE
G182 OPERATE GROUND POWERED AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS MD-4 GENERATORS	55	33	+22
S671 BENCHCHECK F-15 ARC-109 UHF RADIO RECEIVER TRANSMITTERS	82	60	+22
G188 SET UP AVIONICS AND SUPPORT EQUIPMENT AT MOBILITY OPERATING AREAS	32	12	+20
G189 SET UP AVIONICS AND SUPPORT EQUIPMENT FOR NORMAL OPERATION AFTER MOBILITY OPERATIONS	32	12	+20
S684 ISOLATE MALFUNCTIONS IN F-15 ARC-109 UHF RADIO- RECEIVER TRANSMITTERS	82	63	+19
H195 FABRICATE TEST STATION, TEST EQUIPMENT, SIMULATOR, MOCKUP, OR LRU CABLES	53	35	+18
G186 PREPARE AND PACK AVIONICS AND SUPPORT EQUIPMENT FOR MOBILITY OPERATIONS	33	16	+17
H198 INSTALL TEST STATIONS IN WORK AREAS	40	23	+17
S661 ALIGN F-15 ARC-109 UHF RADIO-RECEIVER TRANSMITTERS	77	60	+17
S660 ALIGN F-15 ARC-109 UHF RADIO RECEIVERS	73	58	+15
* * * * *			
H213 REMOVE OR INSTALL TEST REPLACEABLE UNITS (TRU)	65	86	-21
S673 BENCHCHECK F-15 ARN-118 DIGITAL-TO-DIGITAL ADAPTER CONVERTERS	35	58	-23
S685 ISOLATE MALFUNCTIONS IN F-15 ARC-164 UHF RADIO SYSTEMS TO SRU OR CHASSIS	57	81	-24
T734 BENCHCHECK F-15 SIGNAL CONDITIONERS	33	60	-27
S672 BENCHCHECK F-15 ARC-164 UHF RADIO-RECEIVER TRANSMITTERS	55	84	-29
S662 ALIGN F-15 ARC-164 UHF RADIO-RECEIVER TRANSMITTERS	50	79	-29
S674 BENCHCHECK F-15 ARN-118 TACAN RADIO-RECEIVER TRANSMITTERS	48	84	-36
S686 ISOLATE MALFUNCTIONS IN F-15 ARC-118 TACAN RADIO- RECEIVER TRANSMITTERS	45	81	-36
S663 ALIGN F-15 ARN-118 TACAN RADIO-RECEIVER TRANSMITTERS	35	86	-51
G174 CALIBRATE TORQUE WRENCHES	15	74	-59

## ANALYSIS OF AIRCRAFT

As seen in the specialty titles, each shred designates a particular aircraft system; A is the F/FB-111 and B is the F-15. Within the F/FB-111 system there are five models of aircraft; F-111A, F-111D, F-111E, F-111F, and FB-111A; and four models within the F-15 system, F-15A, F-15B, F-15C and F-15D. Previously, in the job structure analysis and major command analysis for the F/FB-111 or AFS 326X5A, the type of aircraft model respondents worked with served as a discriminator in the job they perform. This does not hold true for the F-15 or AFS 326X5B respondents, who perform a very homogeneous function. Therefore, the discussion below will concentrate on the 326X5A specialty.

### F-111A and F-111E

The A and E models of the F-111 are the most alike in terms of the test stations utilized and tasks performed. Both uniquely utilize signal/data converter test stations. The F-111A personnel are assigned only to Mt. Home AFB (TAC) and responded to having four sets of test stations for personnel to maintain, while F-111E personnel at Upper Heyford, U.K. (USAFE) indicated having three sets of test stations to maintain. Otherwise, personnel working on these two systems have similar characteristics. A few of the tasks distinguishing them from other aircraft systems include:

- transfer data from F/FB-111 flight recorder 30-track tape  
magazines to 7-track tapes
- isolate malfunctions in F/FB-111 central air data computers  
to bit and piece
- isolate malfunctions in F/FB-111 12A1803A1 test station angle  
position indicators to SRV or chassis
- benchcheck F/FB-111 liquid oxygen quantity indicators
- benchcheck F/FB-111 aircraft chocks
- align F/FB-111 ARC-109 UHF radio-set control LRU's
- benchcheck F/FB-111 ARC-109 UHF receiver transmitters

The primary distinction between the A and E model is the type of high frequency radio they maintain. F-111A respondents maintain ARC-112 HF equipment, and F-111E respondents maintain ARC-123 HF equipment. Also very similar to these aircraft are many of the tasks performed by FB-111A respondents who have unique additional responsibilities.

### F-111D

Unique to these TAC respondents is the use of the Air-to-Air Interrogator (AAI) Test Equipment Group (AN/APX-76 Hot Mock-up). Several tasks also point out this distinction:

- isolate malfunctions or remove or replace F/FB-111 APX-76 AAI switch amplifier SRUs or bits and pieces
- isolate malfunctions or remove or replace F/FB-111 APX-76 AAI receiver transmitters bits and pieces or SRU's
- isolate malfunctions in F/FB-111 fuel quantity intermediate devices
- align or benchcheck F/FB-111 APX-76 AAI radio set controls
- benchcheck or align F/FB-111 APX-76 AAI synchronizers
- set up avionics and support equipment for normal operation after mobility operations

Assigned to Cannon AFB (TAC), these respondents also maintain many of the same systems other 326X5 personnel do, such as the ARC-123 HF equipment, ILS glide slopes, or ARC-164 UHF equipment.

#### F-111F

Performing the highest average number of tasks (207) these USAFE respondents at Lakenheath U.K. also have the most experience (average 65 months in the service). Incumbents maintaining F-111F systems are distinguished by the use of the Tactical Air Navigation (TACAN) Test Equipment Group (AN/ARN-84 Hot Mock Up). Other units use the AN/ARN-118 Hot Mock-up. Several tasks also point out this distinction:

- perform corrosion control of F/FB-111 simulators or mockups
- align F/FB-111 UHF antennas
- remove or replace F/FB-111 HF antenna coupler control mount bits and pieces
- benchcheck F/FB-111 TS-1843A/B test sets
- remove or replace F/FB-111 UPM-239A test set bits and pieces
- align F/FB-111 ARN-84 TACAN system receiver transmitter
- benchcheck F/FB-111 ARN-84 TACAN radio set controls
- remove or replace F/FB-111-84 TACAN electrical equipment mounting base bits and pieces

#### FB-111A

Having the most distinct job are SAC personnel assigned to FB-111A units at Pease and Plattsburgh AFBs. These respondents are the most inexperienced (average 39 months in service), and have only one set of test stations to use. As seen previously in the MAJCOM analysis, SAC respondents utilize a difference model of test station than other respondents (see Table 10), in the case of the Electrical (12A3439) and Mission and Traffic Control (12A16879) Test Stations. Additionally, they use Satellite Communications Test Stations more than other aircraft groups, but do not use TACAN or Emergency Radio Test Equipment Groups (AN/URM-95A) as often as other respondents. Tasks distinct to these respondents include:

isolate malfunctions in F/FB-111 Mode IV Computers to SRU or chassis  
remove or replace F/FB-111 Mode IV Computer SRU's  
align FB-111 ARC-171 receiver transmitters  
align FB-111 SATCOM teleprinters  
benchcheck FB-111 ARC-171 receiver transmitters  
isolate malfunctions in FB-111 SATCOM controls to SRU or chassis  
remove or replace FB-111 SATCOM control SRU's

Like the F-111A and F-111E respondents, FB-111A incumbents maintain  
ARC-109 UHF equipment.



## TRAINING ANALYSIS

Occupational survey data are just one of many sources of information which can be used to help make training programs more meaningful and relevant to students. Factors provided in occupational surveys which may be used in evaluating training are: percent of first enlistment members performing task(s), utilization of equipment available at the technical school for training, task difficulty ratings, and training emphasis ratings. These factors can be used in evaluating the Specialty Training Standard (STS) and Plan of Instruction (POI) for the 326X5A and 326X5B specialties. Technical school personnel at Lowry AFB, CO, matched inventory tasks to areas of instruction outlined in STSs, dated April 1979, and the POIs for courses 3ABR32635A and 3ABR32635B, dated April 1980, for the Integrated Avionics Manual Test Station specialty. A complete computer listing of the percent members performing, task difficulty, and training emphasis ratings for each task statement along with the STS and POI matchings have been forwarded to the technical school for their use in reviewing training documents. A summary of that information is described below.

### AFS 326X5A

Analysis of First Enlistment Personnel. Each job type found in the F/FB-111 Manual Test Station Shop cluster contained personnel in their first enlistment. Figure 3 presents the distribution of 326X5A first enlistment personnel across job groups identified in JOB STRUCTURE section. The tasks listed as representative of first termers on Table 18 also contain equipment specific tasks performed by each job type. Overall, 103 tasks are performed by 50 percent or more of the first-term respondents, representing a solid core of tasks which would more than likely be performed by a person just entering the specialty. The most common Avionics AGE or Test Equipment groups utilized are listed on Table 19, most of which are available at the technical school and used in the basic resident training course. The most commonly performed tasks (see Table 18) relate to the most utilized avionics test equipment (see Table 19), especially in the areas of Central Air Data Computer, IFF, UHF, and electrical test station and assigned LRU maintenance. Finally, Table 20 lists the most common special tools or equipment utilized by first enlistment personnel. The thirty pieces of this type of equipment utilized by at least 30 percent of the AFS 326X5A incumbents include electronic equipment, such as stroboscopes, audio oscillators, phase sensitive voltmeters, pressure temperature test sets and differential voltmeters. Overall, 326X5A first enlistment personnel perform an operator-maintainer function and will work on several items of equipment or test stations, but in most cases concentrate more of their time on one type of system.

FIGURE 3

JOB GROUP DISTRIBUTION OF AFS 326X5A FIRST ENLISTMENT PERSONNEL

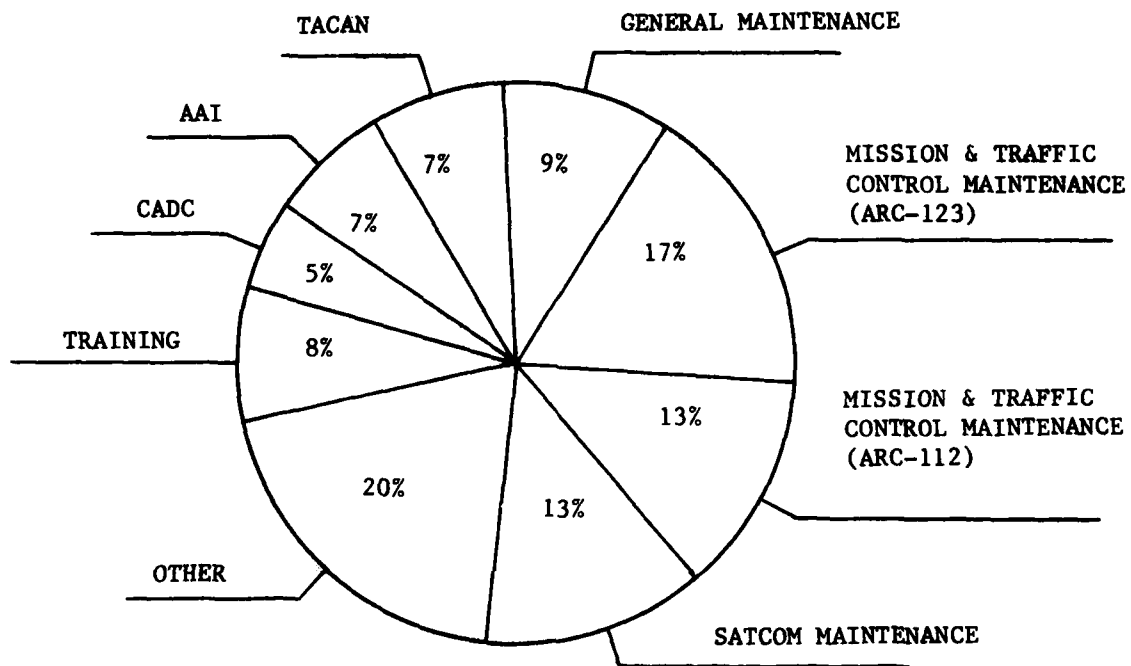


TABLE 18

TASKS MOST COMMONLY PERFORMED BY FIRST ENLISTMENT  
326X5A PERSONNEL

TASK	PERCENT MEMBERS PERFORMING (N=71)
H197 INSTALL CAPS, PLUGS, OR DUST COVERS ON TEST STATIONS, TEST EQUIPMENT, OR LRUs	90
H226 VISUALLY INSPECT AND CLEAN TEST STATIONS	86
H199 INVENTORY TEST STATIONS OR ROLLAWAYS	86
H225 VISUALLY INSPECT AND CLEAN LRUs	85
H207 PERFORM PERIODIC INSPECTIONS OF TEST EQUIPMENT	85
*H204 PERFORM CONFIDENCE CHECKS OF TEST STATIONS	85
H212 PRESSURIZE LRUs	87
H194 CLEAN TEST STATION BLOWER FILTERS	85
H208 PERFORM PERIODIC INSPECTIONS OF TEST STATIONS	83
*M390 BENCHCHECK F/FB-111 CENTRAL AIR DATA COMPUTERS	79
*P557 ISOLATE MALFUNCTIONS IN F/FB-111 ANTICOLLISION LIGHTS	79
P538 BENCHCHECK F/FB-111 ANTICOLLISION LIGHTS	79
*P527 ALIGN F/FB-111 ANTICOLLISION LIGHTS	76
F160 ORDER PARTS BY TELEPHONE	79
H223 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES OR MINOR HARDWARE	79
*M393 BENCHCHECK F/FB-111 MAXIMUM SAFE MACH ASSEMBLIES	75
*F167 RESEARCH MICROFICHE FOR PART INFORMATION	76
*M404 ISOLATE MALFUNCTIONS ON F/FB-111 MAXIMUM SAFE MACH ASSEMBLIES TO SRU OR CHASSIS	75
*F166 RESEARCH MANUALS FOR PART NUMBERS	75
H196 INSPECT EQUIPMENT FOR CURRENT CALIBRATION DATES	77
*K272 BENCHCHECK F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS	75
*H222 REMOVE OR REPLACE TEST STATION CABLE ASSEMBLY PINS OR HARDWARE	75
*P568 REMOVE OR REPLACE F/FB-111 ANTICOLLISION LIGHT BITS AND PIECES	73
M426 REMOVE OR REPLACE F/FB-111 MAXIMUM SAFE MACH ASSEMBLY SRUs	73
*H206 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T&I) OF LRUs ISSUED FROM SUPPLY	73
K271 BENCHCHECK F/FB-111 ARC-164 UHF RADIO SET CONTROLS	73
*M399 ISOLATE MALFUNCTIONS IN F/FB-111 CENTRAL AIR DATA COMPUTERS TO SRU OR CHASSIS	72
*M422 REMOVE OR REPLACE F/FB-111 CENTRAL AIR DATA COMPUTER SRUs	72
H205 PERFORM CORROSION CONTROL OF TEST STATIONS, TEST EQUIPMENT, OR LRUs	72

\* TASKS ALSO RATED HIGH IN TRAINING EMPHASIS BY F/FB-111 RATERS

TABLE 19

AVIONICS AGE TEST STATIONS OR TEST EQUIPMENT GROUPS  
UTILIZED BY AFS 326X5A FIRST ENLISTMENT PERSONNEL  
(30 PERCENT OR MORE UTILIZING)

<u>EQUIPMENT</u>	<u>PERCENT FIRST ENLISTMENT MEMBERS USING</u>
*CENTRAL AIR DATA COMPUTERS (12A1803A1)	90
*IDENTIFICATION-FRIEND-OR-FOE (IFF) TEST EQUIPMENT GROUPS (AN/APX-64 HOT MOCK UP)	82
*ULTRA HIGH FREQUENCY (UHF) TEST EQUIPMENT GROUPS (AN/ARC-164 HOT MOCK UP)	82
*COMMUNICATIONS AND NAVIGATIONAL AIDS TEST STATION (12A16850)	80
**IDENTIFICATION FRIEND-OR-FOE (IFF) MODE IV COMPUTER TEST EQUIPMENT GROUP (KIR/KIT)	72
**INSTRUMENT LANDING SYSTEM (ILS) TEST SETS	62
**RADAR TEST SETS AN/UPM-137	55
EMERGENCY RADIO TEST EQUIPMENT GROUPS (AN/URM-95A)	44
ELECTRICAL TEST STATIONS (12A3409)	49
MISSION AND TRAFFIC CONTROL TEST STATIONS (12A16849)	47
*MISSION AND TRAFFIC CONTROL TEST STATIONS (12A16879)	42
*TACTICAL AIR NAVIGATION (TACAN) TEST EQUIPMENT GROUPS (AN/ARN-118 HOT MOCK UPS)	41
ELECTRICAL TEST STATIONS (12A3439)	38
SIGNAL DATA CONVERTER TEST STATIONS	37
TACTICAL AIR NAVIGATION (TACAN) TEST EQUIPMENT GROUPS (AN/ARN-84 HOT MOCK UPS)	32

\*USED IN THE 3ABR32635A COURSE

\*\*USED IN THE 3ABR32635B COURSE

TABLE 20

SPECIAL TOOLS OR EQUIPMENT UTILIZED BY  
FIRST ENLISTMENT AFS 326X5A PERSONNEL  
(30 PERCENT OR MORE UTILIZING)

<u>EQUIPMENT</u>	<u>PERCENT FIRST ENLISTMENT MEMBERS USING</u>
STROBOSCOPES	97
OSCILLOSCOPES	93
MULTIMETERS (PSM-6, 410Cs, DIGITAL MULTIMETERS)	92
SOLDERING OR DESOLDERING TOOLS	90
SPECTRUM ANALYZERS	90
SIGNAL GENERATORS	89
DUMMY LOADS	87
POWER MEASURING DEVICES	86
TORQUE WRENCHES OR TORQUE SCREWDRIVERS	86
TIRE PUMPS AND GAUGES	83
PRESSURE TEMPERATURE TEST SETS (TTU-205)	83
FREQUENCY MEASURING DEVICES (OFF EQUIPMENT)	80
PHASE SENSITIVE VOLTMETERS (PSVM/PVM)	78
RF VARIABLE ATTENUATORS	78
RADIO FREQUENCY (RF) POWER AMPLIFIERS	78
AUDIO OSCILLATORS	76
DIFFERENTIAL VOLTMETERS	76
CAPACITOR TEST SETS (TF 20-1)	61
PULSE GENERATORS	68
CONNECTOR REPAIR KITS	65
RF MULTIMETERS	63
CAPACITANCE BRIDGES (METERS)	48
VOLTAGE AND CURRENT STANDARD DEVICES	47
CONTROL/MONITOR DEVICES	45
PRESSURE REGULATORS	39
DISTORTION ANALYZERS	38
COMPRESSED GAS BOTTLES	37
RESISTANCE DECADE/DIVIDERS	34
CAPACITANCE DECADE/DIVIDERS	32
ISOLATION BREAKDOWN TEST SETS	32

Analysis of Training Emphasis and Task Difficulty. The relative training emphasis of each F/FB-111 task in the inventory was assessed through ratings of 23 experienced 7- and 9-skill level NCOs in F/FB-111 integrated avionics manual test station shops. These ratings were processed to produce an ordered listing of all tasks in terms of their recommended emphasis for training of first enlistment AFS 326X5A personnel. The relative difficulty of each F/FB-111 task in the job inventory was assessed by 20 experienced 7-skill level NCOs in F/FB-111 manual test station shops. These tasks were processed to produce an ordered listing of all tasks in terms of their relative difficulty. (For a more complete description of these ratings, see the Task Factor Administration subsection in the SURVEY METHODOLOGY section of this report.)

The tasks rated highest in training emphasis for 326X5A first enlistment (first-term) personnel are shown on Table 21. Sixty-three tasks were rated above average in training emphasis, all of which are performed by 30 percent or more of the first-termers. A majority of these tasks deal with maintaining 12A16849 or 12A16879 (Mission and Traffic Control) Test Stations and assigned LRUs. Additionally, these tasks were rated high in task difficulty.

Unusual about the task difficulty ratings is the absence of supervisory or managerial tasks, which are rated as the most difficult to learn. Generally, in this survey, the most difficult tasks involve isolating malfunctions in Mission and Traffic Control Test Stations (12A6849 or 12A16879), Central Air Data Computers or test stations, (12A1803A1), ILS, ARC-123 HF, or ARC-109 UHF radios, and the APX-64 IFF systems. Several tasks were rated above average in difficulty, but were not performed by a substantial (30 percent or more) percent of the specialty incumbents, at any skill level. These tasks involve maintaining the APX-76 AAI or SATCOM systems and ARC-112 HF radios. Tasks involving removing or replacing, benchchecking, and aligning tended to be rated average in difficulty. General maintenance and forms annotation tasks were low in difficulty.

Specialty Training Standard (STS) Analysis. Items in the April 1979 STS were compared to survey data. The 326X5A STS is organized around Avionics AGE Test Equipment utilized to maintain specific aircraft systems. Those paragraphs in the current STS are accurate, in that personnel in the field are utilizing these items. Occupational survey data, however, indicate specialty incumbents working with additional equipment not mentioned in the STS. Equipment items, such as Satellite Communications (SATCOM) Test Stations and assigned LRUs, UHF Test Equipment Groups (AN/ARC-164), Radar Test Sets AN/UPM-137, and Signal/Data Converter Test Stations were responded to as being utilized by AFS 326X5A personnel. Several tasks relating to the 326X5A shred were not annotated to the STS (see Table 22). With the discrepancies pointed out above, a thorough review of the occupational survey data by technical school personnel could help them improve the quality of standards for the career field.

Plan of Instruction (POI) Analysis. The 326X5A Plan of Instruction (POI), dated April 1980, for the 108-day Integrated Avionics Manual Test Station and Component Specialist course taught at Lowry AFB, Colo., was also reviewed in a general sense against the survey data. The POI contains

TABLE 21

TASKS RATED HIGHEST IN TRAINING EMPHASIS FOR  
AFS 326X5A FIRST ENLISTMENT PERSONNEL

TASK	TRAINING* EMPHASIS	PERCENT	TASK** DIFFICULTY
		FIRST-TERMERS RESPONDING	
L292 ALIGN F/FB-111 ARC-123 HF RECEIVER TRANSMITTERS	7.0	49	6.1
L325 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLIES TO SRU OR CHASSIS	7.0	49	6.1
L331 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF RECEIVER TRANSMITTERS TO SRU OR CHASSIS	7.0	48	6.1
L291 ALIGN F/FB-111 ARC-123 HF RADIO SET CONTROL	6.8	49	5.6
L294 ALIGN F/FB-111 HF ANTENNA COUPLERS	6.8	61	5.9
L308 BENCHCHECK F/FB-111 ARC-123 HF RECEIVER TRANSMITTERS	6.8	55	5.0
L305 BENCH CHECK F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLIES	6.7	51	5.2
L329 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF RADIO SET CONTROLS TO SRU OR CHASSIS	6.7	48	5.9
L289 ALIGN F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLIES	6.6	48	5.7
L335 ISOLATE MALFUNCTIONS IN F/FB-111 HF ANTENNA COUPLER CONTROLS TO BIT AND PIECE	6.6	55	6.4
L293 ALIGN F/FB-111 HF ANTENNA COUPLER CONTROLS	6.6	58	5.1
L337 ISOLATE MALFUNCTIONS IN F/FB-111 HF ANTENNA COUPLERS TO SRU OR CHASSIS	6.6	59	5.9
L296 ALIGN F/FB-111 12A16849 or 12A16879 TEST STATION ARTIFICIAL ANTENNAS	6.5	51	6.3
L311 BENCHCHECK F/FB-111 HF ANTENNA COUPLERS	6.5	62	5.0
L326 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLIES TO BIT AND PIECE	6.5	42	6.9
L342 ISOLATE MALFUNCTIONS IN F/FB-111 12A16849 OR 12A16879 TEST STATION RF AMPLIFIERS TO SRU OR CHASSIS	6.5	39	7.3
L298 ALIGN F/FB-111 12A16849 or 12A16879 TEST STATION RF AMPLIFIERS	6.5	37	7.2
L327 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF MOUNTS TO SRU OR CHASSIS	6.5	46	5.4
L338 ISOLATE MALFUNCTIONS IN F/FB-111 HF ANTENNA COUPLERS TO BIT AND PIECE	6.4	51	6.2
L345 ISOLATE MALFUNCTIONS IN F/FB-111 12A16849 OR 12A16879 TEST STATION RF AMPLIFIERS TO BIT AND PIECE	6.4	37	8.0
L297 ALIGN F/FB-111 12A16849 OR 12A16879 TEST STATION EXCITERS	6.4	41	6.6

\*AVERAGE TE RATING = 2.6 (S.D. = 3.0)

\*\*AVERAGE TD RATING = 5.0 (S.D. = 1.0)

## TASKS NOT REFERENCED TO STS 326X5A

48

D TSK	TITLES	T.E X5A *D*	1ST FNL (M)	326 35A (M)	326 35A (M)	T.O X5A (F)
----- TASKS NOT REFERENCED -----						
L 292	ALIGN F/FB-111 ARC-123 HF RECEIVER TRANSMITTERS	7.04	49.3	30.8	59.4	6.11
L 291	ALIGN F/FB-111 ARC-123 HF RADIO SET CONTROL	6.83	49.3	30.8	59.4	5.64
L 294	ALIGN F/FB-111 HF ANTENNA COUPLERS	6.78	60.6	46.2	68.4	5.88
L 289	ALIGN F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLIES	6.65	47.9	30.8	58.3	5.72
L 293	ALIGN F/FB-111 HF ANTENNA COUPLER CONTROLS	6.56	57.7	46.2	65.6	5.07
L 296	ALIGN F/FB-111 12A16849 OR 12A16879 TEST STATION ARTIFICIAL ANTENNAS	6.52	50.7	38.5	54.2	6.29
L 298	ALIGN F/FB-111 12A16849 RO 12A16879 TEST STATION RF AMPLIFIERS	6.48	36.6	15.4	45.8	7.20
L 297	ALIGN F/FB-111 12A16849 RO 12A16879 TEST STATION EXCITERS	6.39	40.8	38.5	45.8	6.60
L 295	ALIGN F/FB-111 HF VARIABLE DIELECTRIC VACUUM CAPACITORS	6.35	52.1	30.8	61.5	5.86
L 449	ALIGN F/FB-111 APX-64 IFF SYSTEM RECEIVER TRANSMITTERS	6.22	54.9	30.8	61.5	6.02
L 290	ALIGN F/FB-111 ARC-123 HF MOUNTS	6.13	39.4	30.8	52.1	4.60
D 98	DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	5.70	38.0	30.8	45.8	4.24
F 167	RESEARCH MICROFICHE FOR PART INFORMATION	5.65	76.1	53.8	81.3	3.89
K 269	ALIGN F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS	5.65	66.2	30.8	74.0	4.28
M 222	REMOVE OR REPLACE TEST STATION CABLE ASSEMBLY PINS OR HARDWARE	5.56	74.6	38.5	78.1	4.44
M 303	ALIGN F/FB-111 MAXIMUM SAFE MACH ASSEMBLIES	5.56	63.4	46.2	67.7	4.74
J 240	ALIGN F/FB-111 INSTRUMENT LANDING SYSTEM (ILS) GLIDE SLOPE MARKER BEACON RECEIVERS	5.52	59.2	38.5	65.6	5.64
K 275	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS TO SRU OR CHASSIS	5.52	67.6	30.8	72.9	5.00
P 527	ALIGN F/FB-111 ANTICOLLISION LIGHTS	5.52	76.1	46.2	79.2	4.38
J 239	ALIGN F/FB-111 LOCALIZER RECEIVERS	5.48	54.9	38.5	61.5	5.64
K 273	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 RAD.0 SET CONTROLS TO SRU OR CHASSIS	5.30	64.8	30.8	71.9	4.77
K 274	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 TEST SETS	5.30	46.5	30.8	55.2	4.93
K 272	BENCHMARK F/FB-111 APC-164 UHF RECEIVER TRANSMITTERS	5.26	74.6	53.8	79.2	4.27
K 282	REMOVE OR REPLACE F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS SPU'S	5.09	64.8	38.5	67.7	4.06
M 190	ALIGN EMERGENCY RADIOS	5.04	35.2	23.1	38.5	4.04
K 278	PERFORM CONFIDENCE CHECKS OF F/FB-111 ARC-164 TEST GROUP WOCKUPS	5.00	57.7	30.8	63.5	4.29
' 280	REMOVE OR REPLACE F/FB-111 ARC-164 UHF RADIO SET CONTROL SRU'S	5.00	60.6	38.5	63.5	3.98
M 208	PERFORM PERIODIC INSPECTIONS OF TEST STATIONS	4.91	83.1	53.8	84.4	4.54
M 389	ALIGN F/FB-111 12A1803A1 TEST STATION TAPP PLOCK READERS	4.91	36.6	30.8	42.7	6.40
E 137	ANNOTATE SUPPLY CONTROL LOG FORMS (AF FORM 2413)	4.83	40.8	30.8	50.0	3.20
K 271	BENCHMARK F/FB-111 APC-164 UHF RADIO SET CONTROLS	4.83	73.2	53.8	76.0	4.30
N 458	BENCHMARK F/FB-111 MODE IV COMPUTERS	4.83	36.6	23.1	44.1	4.65
N 471	ISOLATE MALFUNCTIONS IN F/FB-111 MODE IV COMPUTERS TO SRU OR CHASSIS	4.83	34.0	30.8	40.6	5.08
K 270	BENCHMARK F/FB-111 APC-164 UHF FREQUENCY INDICATORS	4.78	57.7	46.2	61.5	4.35
M 224	VISUALLY INSPECT AND CLEAN TEST STATIONS	4.74	85.9	61.5	86.5	3.62
M 209	PERFORM QUALITY ASSURANCE (QA) OR QUALITY CONTROL (QC) INSPECTIONS OF TEST STATIONS, TEST EQUIPMENT, OR LRU'S	4.70	33.8	23.1	38.5	5.09



TABLE 22 (CONTINUED)

## SYS320XSA MATCHED WITH OCCUPATIONAL SURVEY DATA

D TSM	TITLES	1.E XSA #0*	1ST FNL (M)	326 35A (M)	326 35A (M)	326 55A (M)	1.0 XSA (F)
M 308	ALIGN F/FB-111 12A1803A1 TEST STATION SIGNAL SIMULATE AND MEASURE PANELS	4.70	31.0	30.8	30.8	38.5	5.35
M 276	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS TO BIT AND PIECE	4.65	29.6	23.1	23.1	37.5	6.10
M 277	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 UHF RADIO SET CONTROLS TO BIT AND PIECE	4.56	31.0	23.1	23.1	39.6	5.74
M 213	REMOVE OR INSTALL TEST REPLACEABLE UNITS (TRU'S)	4.52	34.8	53.8	53.8	67.7	3.40
M 494	REMOVE OR REPLACE F/FB-111 MODE IV COMPUTER SRU'S	4.48	35.2	23.1	23.1	37.5	4.56
M 207	PERFORM PERIODIC INSPECTIONS OF TEST EQUIPMENT	4.44	35.5	53.8	53.8	82.3	4.19
M 279	REMOVE OR REPLACE F/FB-111 ARC-164 TEST SET BITS AND PIECES	4.44	36.6	23.1	23.1	42.7	4.46
E 131	AMMUNITION RECEIPT OF LRU'S INTO OR OUT OF SHOP ON FORMS SUCH AS REPAIR CYCLE CONTROL LOG FORMS (AF FORM 252U)	4.39	36.6	15.4	15.4	44.8	2.77
F 164	PREPARE MATERIAL DEFICIENCY REPORTS	4.39	46.5	30.8	30.8	50.0	4.89
G 174	CALIBRATE TORQUE WRENCHES	4.35	31.0	34.4	34.4	34.4	3.79
F 160	ORDER PARTS BY TELEPHONE	4.26	78.9	53.8	53.8	82.3	3.19
K 281	REMOVE OR REPLACE F/FB-111 ARC-164 UHF RADIO SET CONTROL BITS AND PIECES	4.26	35.2	23.1	23.1	40.6	4.52
C 85	REVIEW MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349) FOR ACCURACY	4.22	14.1	15.4	15.4	22.9	4.84
F 165	PREPARE QUALITY DEFICIENCY REPORTS	4.22	40.8	23.1	23.1	36.5	4.39
M 200	ISOLATE MALFUNCTIONS IN EMERGENCY RADIOS TO SRU	4.17	23.9	23.1	23.1	24.0	4.08
P 531	ALIGN F/FB-111 HIGH LIFT POSITION MECHANISMS	4.17	45.1	23.1	23.1	55.2	4.32
M 445	SAFETY WIRE F/FB-111 CENTRAL AIR DATA COMPUTER SRU'S	4.13	56.3	38.5	38.5	62.5	3.21
P 529	ALIGN F/FB-111 FUEL QUANTITY INTERMEDIATE DEVICES	4.09	43.7	30.8	30.8	46.9	4.26
K 283	REMOVE OR REPLACE F/FB-111 ARC-164 UHF RECEIVER TRANSMITTER BITS AND PIECES	4.04	33.8	23.1	23.1	38.5	4.96
M 380	ALIGN F/FB-111 CENTRAL AIR DATA COMPUTERS	4.04	19.7	30.8	30.8	27.1	6.04
M 201	ISOLATE MALFUNCTIONS IN EMERGENCY RADIOS TO BIT AND PIECE	4.00	18.3	15.4	15.4	17.7	4.64
M 446	ALIGN F/FB-111 APX-76 AIR-TO-AIR INTERROGATOR (AAI) RECEIVER TRANSMITTERS	4.00	2.5	.0	.0	10.4	6.74
M 199	INVENTORY TEST STATIONS OR ROLLAWAYS	3.83	85.9	69.2	69.2	88.5	2.95
M 385	ALIGN F/FB-111 SUBSYSTEM TIE-IN TEST SETS	3.83	22.5	7.7	7.7	27.1	5.59
M 450	ALIGN F/FB-111 TS-1843A/B TEST SETS	3.83	9.9	.0	.0	16.7	5.21
G 178	MAINTAIN NUCLEAR, BIOLOGICAL, AND CHEMICAL WARFARE EQUIPMENT	3.78	7.0	15.4	15.4	12.5	3.87
M 223	REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR MINOR HARDWARE	3.78	78.9	46.2	46.2	83.3	2.55
O 503	ALIGN F/FB-111 ARN-84 TACAN SYSTEM RECEIVER TRANSMITTERS	3.78	14.1	.0	.0	24.0	5.85
L 288	ALIGN F/FB-111 ARC-112 HF RECEIVER TRANSMITTERS	3.74	18.3	.0	.0	20.8	5.95
J 238	ALIGN F/FB-111 ARC-109 UHF RECEIVER TRANSMITTERS	3.70	56.3	38.5	38.5	50.0	5.64
L 285	ALIGN F/FB-111 ARC-112 HF AMPLIFIER POWER SUPPLIES	3.70	16.9	.0	.0	20.8	6.01
M 457	BENCHCHECK F/FB-111 APX-76 IFF RADIO SET CONTROLS	3.70	15.5	.0	.0	16.7	4.68
F 156	MAINTAIN TECHNICAL ORDER FILES	3.65	18.3	15.4	15.4	19.8	4.26
M 212	PRESSURIZE LRU'S	3.65	87.3	61.5	61.5	87.5	2.53
P 534	ALIGN F/FB-111 POSITION MECHANISM ASSEMBLIES	3.61	12.7	15.4	15.4	13.5	4.53
L 287	ALIGN F/FB-111 ARC-112 HF RADIO SET CONTROLS	3.56	16.9	.0	.0	19.4	4.92
M 448	ALIGN F/FB-111 APX-76 AAI SYNCHRONIZERS	3.52	7.0	.0	.0	8.3	6.35

TABLE 22 (CONTINUED)

## SYS326XSA MATCHED WITH OCCUPATIONAL SURVEY DATA

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D TSK	TITLES	1-E #00	1ST ENL (M)	326 XSA (M)	326 XSA (M)	326 XSA (M)	1.0 XSA (F)
N 473	ISOLATE MALFUNCTIONS IN F/FB-111 MODE IV INTERROGATOR TEST SETS TO SRU OR CHASSIS	3.52	19.7	15.4	22.9	4.81	1.0
O 501	ALIGN F/FB-111 ARN-11R TACAN RECEIVER TRANSMITTER ADAPTERS	3.52	7.0	7.7	8.3	5.24	
G 183	PACK OR UNPACK LINE REPLACEABLE UNITS (LRU'S) OR SHOP REPLACEABLE UNITS (SRU'S) FOR SHIPMENT	3.48	64.8	53.8	55.2	2.82	
I 234	REMOVE OR REPLACE F/FB-111 SIMULATOR OR MOCKUP CABLE ASSEMBLY PINS OR HARDWARE	3.48	36.6	7.7	43.8	4.10	
J 237	ALIGN F/FB-111 ARC-109 UHF RADIO SET CONTROL LRU'S	3.48	47.9	38.5	43.8	4.58	
M 387	ALIGN F/FB-111 12A1803A1 TEST STATION ANGLE POSITION INDICATORS	3.48	29.6	23.1	32.3	5.47	
L 286	ALIGN F/FB-111 ARC-112 HF MOUNTS	3.44	9.9	.0	13.5	4.59	
N 447	ALIGN F/FB-111 APX-76 AAI SWITCH AMPLIFIERS	3.44	7.0	.0	8.3	6.35	
N 478	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-239/A TEST SETS TO SRU OR CHASSIS	3.44	15.5	.0	20.8	5.24	
G 176	MAINTAIN INTERPHONE GROUND CORDS AND HEADSETS	3.39	46.5	53.8	43.8	3.19	
G 186	PREPARE AND PACK AVIONICS AND SUPPORT EQUIPMENT FOR MOBILITY OPERATIONS	3.35	25.4	.0	24.0	3.90	
H 191	ALIGN F/FB-111 12A6659-2 TAPE READER UNITS	3.30	16.9	.0	19.8	4.53	
J 253	ISOLATE MALFUNCTIONS IN F/FB-111 ARM-134 TEST SETS	3.30	7.0	.0	12.5	6.02	
N 480	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-245 TEST SETS TO SRU OR CHASSIS	3.30	9.9	.0	13.5	5.55	
N 479	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-245 TEST SETS TO BIT AND PIECE	3.22	9.9	.0	13.5	5.48	
L 284	ALIGN F/FB-111 APX-78 RADAR BEACON TRANSPONDER RECEIVER TRANSMITTERS	3.17	15.5	7.7	13.5	5.19	
O 502	ALIGN F/FB-111 ARN-84 TACAN SERIAL TO PARALLEL CONVERTERS	3.17	7.0	.0	13.5	4.92	
P 530	ALIGN F/FB-111 FUSELAGE FUEL INDICATORS	3.17	25.4	15.4	25.0	4.47	
C 80	PREPARE APR'S	3.13	7.0	.0	22.9	6.04	
G 188	SET UP AVIONICS AND SUPPORT EQUIPMENT AT MOBILITY OPERATING AREAS	3.13	15.5	.0	14.6	5.23	
G 189	SET UP AVIONICS AND SUPPORT EQUIPMENT FOR NORMAL OPERATION AFTER MOBILITY OPERATIONS	3.09	19.7	7.7	16.7	4.72	
M 203	ISOLATE MALFUNCTIONS IN F/FB-111 12A6659-2 TAPE READER UNITS TO SRU OR CHASSIS	3.09	11.3	.0	16.7	5.47	
M 386	ALIGN F/FB-111 TERRAIN FOLLOWING RADAR (TFR) TEST SETS	3.09	7.0	7.7	9.4	5.59	
N 477	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-239/2 TEST SETS TO BIT AND PIECE	3.09	12.7	.0	18.8	5.68	
F 157	MAINTAIN TOOL STORAGE AREAS	3.04	23.9	15.4	21.9	4.18	
M 481	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-268 TEST SETS TO BIT AND PIECE	3.04	1.4	.0	1.0	5.64	
G 175	INSPECT AND CLEAN WAVEGUIDES	3.00	1.4	7.7	.0	3.50	
E 128	ANNOTATE PHE CERTIFICATION LABEL FORMS (AFTO FORM 108)	2.96	19.7	15.4	21.9	3.12	
H 193	BENCHMARK F/FB-111 12A6659-2 TAPE READER UNITS	2.96	16.3	.0	20.8	4.41	
I 229	PERFORM CONFIDENCE CHECKS OF F/FB-111 SIMULATORS OR MOCKUPS	2.96	42.3	23.1	47.6	3.78	
N 482	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-268 TEST SETS TO SRU OR CHASSIS	2.96	1.4	.0	1.0	5.32	

TABLE 22 (CONTINUED)

## SY332645A MATCHED WITH OCCUPATIONAL SURVEY DATA

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D TSK	TITLE	T.E XSA 000	1ST ENL (M)	326 35A (M)	326 55A (M)	T.D XSA (F)
M 495	REMOVE OR REPLACE F/FB-111 MODE IV INTERROGATOR TEST SET BITS AND PIECES	2.96	16.9	15.4	19.8	4.75
M 202	ISOLATE MALFUNCTIONS IN F/FB-111 12A6659-2 TAPE READER UNITS TO BIT AND PIECE	2.91	15.5	0	18.8	5.65
M 218	REMOVE OR REPLACE F-15 TRU SRU'S	2.91	1.4	0	1.0	4.21
M 453	BENCHMARK F/FB-111 APX-74 AAI RECEIVER TRANSMITTERS	2.91	5.6	7.7	7.3	6.44
P 528	ALIGN F/FB-111 DUAL INDICATING OIL QUANTITY INDICATORS	2.91	28.2	30.8	27.1	4.06
M 498	REMOVE OR REPLACE F/FB-111 UPM-239/A TEST SET BITS AND PIECES	2.87	16.9	7.7	22.9	4.85
P 533	ALIGN F/FB-111 OIL PRESSURE INDICATORS	2.87	18.3	23.1	16.7	3.94
P 535	ALIGN F/FB-111 SELECT AND TOTAL FUEL INDICATORS	2.87	26.8	30.8	22.9	4.29
C 84	REVIEW EQUIPMENT RECOPIOS FOR ACCURACY	2.83	11.3	7.7	18.8	4.06
M 381	ALIGN F/FB-111 ENGINE PRESSURE RATIO TRANSMITTERS	2.83	11.3	15.4	9.4	5.11
F 147	MAINTAIN BENCHSTOCK PARTS OR EQUIPMENT LEVELS	2.78	7.0	7.7	6.3	4.82
F 148	MAINTAIN DAILY DOCUMENT REGISTER OR ITEM SURVEILLANCE LISTS (DON)	2.78	14.1	15.4	15.6	4.84
M 217	REMOVE OR REPLACE F-15 LRU SRU'S EXCEPT RADAR SYSTEM SRU'S	2.78	1.4	0	1.0	3.36
M 499	REMOVE OR REPLACE F/FB-111 UPM-245 TEST SET BITS AND PIECES	2.78	12.7	7.7	16.7	5.13
M 384	ALIGN F/FB-111 STANDBY ALTIMETERS	2.74	18.3	15.4	16.7	4.23
G 177	MAINTAIN MOBILITY KITS	2.70	8.5	0	7.3	4.14
M 197	INSTALL CAPS, PLUGS, OR DUST COVERS ON TEST STATIONS, TEST EQUIPMENT, OR LUR'S	2.70	90.1	69.2	91.7	1.21
J 260	PERFORM SELF-TESTS OF F/FB-111 ARM-134 TEST SETS	2.65	9.9	0	20.8	4.70
M 472	ISOLATE MALFUNCTIONS IN F/FB-111 MODE IV COMPUTERS TO BIT AND PIECE	2.65	18.3	23.1	20.8	5.77
F 170	VERIFY DUE-IN FROM MAINTENANCE (DIFM) DOCUMENT LISTINGS (R-26)	2.61	21.1	15.4	26.0	4.35
G 180	MAINTAIN TEST EQUIPMENT STORAGE AREAS	2.61	25.4	23.1	24.0	3.36
I 235	REMOVE OR REPLACE F/FB-111 SIMULATOR OR MOCKUP LIGHT BULBS, FUSES, OR MINOR HARDWARE	2.61	38.0	15.4	43.8	3.03
M 474	ISOLATE MALFUNCTIONS IN F/FB-111 MODE IV INTERROGATOR TEST SETS TO BIT AND PIECE	2.61	16.9	23.1	19.8	5.16
M 500	REMOVE OR REPLACE F/FB-111 UPM-268 TEST SET BITS AND PIECES	2.61	2.8	0	3.1	5.08
F 168	RESEARCH SUPPLY PUBLICATIONS	2.56	16.9	7.7	22.9	4.61
M 211	PREPARE DEFECTIVE TEST STATION EQUIPMENT FOR SHIPMENT	2.56	36.6	15.4	36.5	3.67
M 216	REMOVE OR REPLACE F-15 CHASSIS MOUNTED LRU COMPONENTS, SUCH AS FUSES, CIRCUIT BREAKERS, OR TRANSFORMERS	2.56	1.4	0	1.0	3.20
E 120	ANNOTATE OOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT FORMS (OD FORM 1348-1)	2.52	25.4	15.4	31.3	3.10
E 121	ANNOTATE EQUIPMENT DISCREPANCIES FORMS (AF FORM 2421)	2.48	11.3	7.7	10.4	3.56
E 127	ANNOTATE NON-MSN REQUISITION (MANUAL) FORMS (OD FORM 1348-6)	2.39	19.7	15.4	24.0	3.99
F 173	VERIFY SUPPLY DUE-OUT LISTINGS (M-30 OR R-35)	2.39	14.1	15.4	15.6	4.10
M 493	REMOVE OR REPLACE F/FB-111 MODE IV COMPUTER BITS AND PIECES	2.35	16.9	15.4	17.7	5.31
F 171	VERIFY PRIORITY MONITOR REPORTS (D-18)	2.30	21.1	7.7	25.0	4.36
H 198	INSTALL TEST STATIONS IN WORK AREAS	2.30	42.3	15.4	46.9	3.53

the qualitative requirements for course 3ABR32635A, in terms of criterion objectives for each unit of instruction and shows time, training standard correlation, support materials, and lesson plans. Topics covered in the course include electronic principles; F-111 Integrated Avionics Maintenance; HF and UHF Communications Systems; Communication and Navigational Aids Test Station; Mission and Traffic Control Test Station; Analysis and Maintenance of the Central Air Data Computer Test Station; TACAN (ARN-118); IFF Airborne Transponder System; and (if first assignment to F-111D unit) the Air-to-Air Interrogation System and Test Equipment Groups. Each of the items of equipment taught in the basic course are utilized by over 40 percent of the first enlistment respondents. The AAI system was uniquely responded to by personnel in F-111D units. The survey data very much support the content of this POI.

Data also indicated some areas which may be considered for inclusion into the course. First enlistment personnel were found maintaining SATCOM equipment. While only a small group of respondents form this job type (GRP081), the proportion of personnel in F-111D units maintaining AAI systems was also small. The same type of arrangement for instruction on SATCOM equipment could be provided as for AAI, contingent on unit of assignment.

As seen on Table 19 over 50 percent of the 326X5A first enlistment personnel utilize ILS, Radar Test Sets AN/UPM-137, and IFF Mode IV Computer test equipment groups, as do AFS 326X5B personnel. However, these items are not in the A shred course, but are included in the B shred course. Additionally, each job type formed in the job structure indicated using at least one of the two electrical test stations (12A3409 or 12A3439).

Several tasks rated high in training emphasis and task difficulty and performed by at least 30 percent of the first enlistment personnel, were not annotated to any area of the POI. Many of these tasks relate to the Electrical Test station (anticollision lights) or ILS test set which are not discussed in the course (see Table 23). Many of the tasks, however, relate to the ARC-123 HF Radio, 12A16850 CommNavAids test station, and UHF (ARC-164) test equipment group, which have other tasks referenced in the POI (Blocks X unit 9, VIII unit 3, and Block III unit 12, respectively). The tasks listed as not referenced should be reviewed by training personnel to determine their relevancy in training.

TABLE 23

TASKS NOT REFERENCED TO POI 3ABR32625A

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D TSK	TITLES	T-E XSA #P#	1ST ENL (M)	T-U XSA (F)
----- TASKS NOT REFERENCED -----				
L 292	ALIGN F/FB-111 ARC-123 HF RECEIVER TRANSMITTERS	7.04	49.3	6.11
L 291	ALIGN F/FB-111 ARC-123 HF RADIO SET CONTROL	6.83	49.3	5.64
L 294	ALIGN F/FB-111 HF ANTENNA COUPLERS	6.78	60.6	5.88
L 289	ALIGN F/FB-111 ARC-123 HF AMPLIFIER POWER SUPPLIES	6.65	47.9	5.72
L 293	ALIGN F/FB-111 HF ANTENNA COUPLER CONTROLS	6.56	57.7	5.07
L 337	ISOLATE MALFUNCTIONS IN F/FB-111 HF ANTENNA COUPLERS TO SRU OR CHASSIS	6.56	59.2	5.86
L 296	ALIGN F/FB-111 12A16849 OR 12A16879 TEST STATION ARTIFICIAL ANTENNAS	6.52	50.7	6.29
L 311	BENCHCHECK F/FB-111 HF ANTENNA COUPLERS	6.52	62.0	4.98
L 298	ALIGN F/FB-111 12A16849 RO 12A16879 TEST STATION RF AMPLIFIERS	6.48	36.6	7.20
L 327	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF MOUNTS TO SRU OR CHASSIS	6.48	46.5	5.40
L 338	ISOLATE MALFUNCTIONS IN F/FB-111 HF ANTENNA COUPLERS TO BIT AND PIECE	6.44	50.7	6.14
L 297	ALIGN F/FB-111 12A16849 RO 12A16879 TEST STATION EXCITERS	6.39	40.8	6.60
L 295	ALIGN F/FB-111 HF VARIABLE DIELECTRIC VACUUM CAPACITORS	6.35	52.1	5.86
M 449	ALIGN F/FB-111 APX-64 IFF SYSTEM RECEIVER TRANSMITTERS	6.22	54.9	6.02
L 290	ALIGN F/FB-111 ARC-123 HF MOUNTS	6.13	39.4	4.60
L 306	BENCHCHECK F/FB-111 ARC-123 HF MOUNTS	6.09	53.5	4.50
L 309	BENCHCHECK F/FB-111 HF ANTENNA COUPLER CONTROL MOUNTS	6.09	36.6	4.54
L 312	BENCHCHECK F/FB-111 HF VARIABLE DIELECTRIC VACUUM CAPACITORS	6.04	57.7	4.62
L 334	ISOLATE MALFUNCTIONS IN F/FB-111 HF ANTENNA COUPLER CONTROL MOUNTS TO SRU OR CHASSIS	6.04	42.3	5.63
M 462	ISOLATE MALFUNCTIONS IN F/FB-111 APX-64 IFF SYSTEM RECEIVER TRANSMITTERS TO BIT AND PIECE	6.00	54.9	7.09
L 328	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-123 HF MOUNTS TO BIT AND PIECE	5.96	43.7	5.66
L 340	ISOLATE MALFUNCTIONS IN F/FB-111 HF VARIABLE DIELECTRIC VACUUM CAPACITORS TO BIT AND PIECE	5.96	43.7	6.17
P 557	ISOLATE MALFUNCTIONS IN F/FB-111 ANTICOLLISION LIGHTS	5.96	78.9	5.03
M 206	PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I) OF LRU'S ISSUED FROM SUPPLY	5.91	73.2	4.61
L 339	ISOLATE MALFUNCTIONS IN F/FB-111 HF VARIABLE DIELECTRIC VACUUM CAPACITORS TO SRU OR CHASSIS	5.91	52.1	5.90
E 136	ANNOTATE SIGNIFICANT HISTORICAL DATA FORMS (AFTO FORM 95)	5.87	64.8	3.18
J 259	ISOLATE MALFUNCTIONS IN F/FB-111 12A16850 TEST STATIONS TO TPU COMPONENTS	5.87	54.9	5.74
J 258	ISOLATE MALFUNCTIONS IN F/FB-111 12A16850 TEST STATIONS TO TPU	5.83	59.2	5.38
J 254	ISOLATE MALFUNCTIONS IN F/FB-111 TLS GLIDE SLOPE MARKER BEACON RECEIVERS TO BIT AND PIECE	5.78	46.5	6.59
F 166	RESEARCH MANUALS FOR PART NUMBERS	5.74	74.6	4.19

TABLE 23 (CONTINUED)

POL 3ADR32635A MATCHED WITH SURVEY DATA

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D TSM	TITLES	T.E XSA *D*	1ST ENL (M)	T.O XSA (F)
J 255	ISOLATE MALFUNCTIONS IN F/FB-111 ILS GLIDE SLOPE MARKER BEACON RECEIVERS TO SRU OR CHASSIS	5.74	54.9	5.94
J 256	ISOLATE MALFUNCTIONS IN F/FB-111 ILS LOCALIZER RECEIVERS TO BIT AND PIECE	5.74	42.3	6.43
M 461	ISOLATE MALFUNCTIONS IN F/FB-111 APX-64 IFF SYSTEM RECEIVER TRANSMITTERS TO SRU OR CHASSIS	5.74	57.7	6.18
F 167	RESEARCH MICROFICHE FOR PART INFORMATION	5.65	76.1	3.89
K 269	ALIGN F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS	5.65	66.2	4.28
P 568	REMOVE OR REPLACE F/FB-111 ANTICOLLISION LIGHT BITS AND PIECES	5.65	73.2	4.94
M 452	BENCHCHECK F/FB-111 APX-64 IFF SYSTEM RECEIVER TRANSMITTERS	5.61	62.0	5.67
M 222	REMOVE OR REPLACE TEST STATION CABLE ASSEMBLY PINS OR HARDWARE	5.56	74.6	4.44
M 383	ALIGN F/FB-111 MAXIMUM SAFR MACH ASSEMBLIES	5.56	63.4	4.74
J 240	ALIGN F/FB-111 INSTRUMENT LANDING SYSTEM (ILS) GLIDE SLOPE MARKER BEACON RECEIVERS	5.52	59.2	5.64
K 275	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS TO SRU OR CHASSIS	5.52	67.6	5.00
P 527	ALIGN F/FB-111 ANTICOLLISION LIGHTS	5.52	76.1	4.38
J 239	ALIGN F/FB-111 LOCALIZER RECEIVERS	5.48	54.9	5.64
J 245	BENCHCHECK F/FB-111 ILS GLIDE SLOPE MARKER BEACON RECEIVERS	5.48	62.0	4.46
J 246	BENCHCHECK F/FB-111 ILS LOCALIZER RECEIVERS	5.48	59.2	4.65
M 484	REMOVE OR REPLACE F/FB-111 APX-64 IFF SYSTEM RECEIVER TRANSMITTER BITS AND PIECES	5.48	59.2	6.04
M 451	BENCHCHECK F/FB-111 APX-64 IFF SYSTEM CONTROL BOXES	5.39	67.6	4.55
J 257	ISOLATE MALFUNCTIONS IN F/FB-111 ILS LOCALIZER RECEIVERS TO SRU OR CHASSIS	5.30	54.9	5.77
M 273	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 RADIO SET CONTROLS TO SRU OR CHASSIS	5.30	64.8	4.77
K 274	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 TEST SETS	5.30	46.5	4.93
M 460	ISOLATE MALFUNCTIONS IN F/FB-111 APX-64 IFF RADIO SET CONTROLS TO BIT AND PIECE	5.30	59.2	5.64
M 483	REMOVE OR REPLACE F/FB-111 APX-64 IFF RADIO SET CONTROL BITS AND PIECES	5.26	59.2	4.88
L 360	REMOVE OR REPLACE F/FB-111 ARC-123 HF MOUNT BITS AND PIECES	5.22	47.9	5.21
J 265	REMOVE OR REPLACE F/FB-111 ILS GLIDE SLOPE MARKER BEACON RECEIVER BITS AND PIECES	5.17	49.3	5.11
J 267	REMOVE OR REPLACE F/FB-111 ILS LOCALIZER RECEIVER BITS AND PIECES	5.17	45.1	5.23
M 485	REMOVE OR REPLACE F/FB-111 APX-64 IFF SYSTEM RECEIVER TRANSMITTER SRU'S	5.17	59.2	4.74
J 266	REMOVE OR REPLACE F/FB-111 ILS GLIDE SLOPE MARKER BEACON RECEIVER SRU'S	5.13	52.1	4.20
J 268	REMOVE OR REPLACE F/FB-111 ILS LOCALIZER RECEIVER SRU'S	5.13	47.9	4.11
L 336	ISOLATE MALFUNCTIONS IN F/FB-111 HF ANTENNA COUPLER CONTROL MOUNTS TO BIT AND PIECE	5.13	36.6	5.32

TABLE 23 (CONTINUED)

POI 3ABR32635A MATCHED WITH SURVEY DATA

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D TSK	TITLE	T-E XSA #0*	1ST ENL (M)	T-D XSA (F)
K 202	REMOVE OR REPLACE F/FR-111 ARC-164 UHF RECEIVER TRANSMITTERS SRU'S	5.09	64.8	4.06
M 190	ALIGN EMERGENCY RADIOS	5.04	35.2	4.04
E 122	ANNOTATE ISSUE/TURN IN REQUEST FORMS (AF FORM 2005)	5.00	56.3	3.20
E 143	ANNOTATE UNSERVICEABLE (REPARABLE) TAG MATERIEL FORMS (DD FORM 1577-2)	5.00	49.3	3.27
K 270	PERFORM CONFIDENCE CHECKS OF F/FR-111 ARC-164 TEST GROUP WORKUPS	5.00	57.7	4.29
K 280	REMOVE OR REPLACE F/FR-111 ARC-164 UHF RADIO SET CONTROL SRU'S	5.00	60.6	3.98
L 372	REMOVE OR REPLACE F/FR-111 HF VARIABLE DIELECTRIC VACUUM CAPACITOR BITS AND PIECES	5.00	40.8	5.64
L 361	REMOVE OR REPLACE F/FR-111 ARC-123 HF MOUNT SRU'S	4.96	43.7	4.92
M 208	PERFORM PERIODIC INSPECTIONS OF TEST STATIONS	4.91	83.1	4.54
M 389	ALIGN F/FR-111 12A1803A1 TEST STATION TAPE BLOCK READERS	4.91	36.6	6.40
L 367	REMOVE OR REPLACE F/FR-111 HF ANTENNA COUPLER BITS AND PIECES	4.87	54.9	5.61
L 376	REMOVE OR REPLACE F/FR-111 12A16849 OR 12A16879 TEST STATION RF AMPLIFIER BITS AND PIECES	4.87	36.6	6.37
L 379	REMOVE OR REPLACE F/FR-111 12A16849 OR 12A16879 TEST STATION TRU BITS AND PIECES	4.87	46.5	5.13
E 137	ANNOTATE SUPPLY CONTROL LOG FORMS (AF FORM 2413)	4.83	40.8	3.20
M 458	BENCHCHECK F/FR-111 MODE IV COMPUTERS	4.83	36.6	4.65
M 471	ISOLATE MALFUNCTIONS IN F/FR-111 MODE IV COMPUTERS TO SRU OR CHASSIS	4.83	38.0	5.08
M 225	VISUALLY INSPECT AND CLEAN LRU'S	4.78	84.5	3.23
L 370	REMOVE OR REPLACE F/FR-111 HF ANTENNA COUPLER CONTROL MOUNT BITS AND PIECES	4.78	35.2	5.06
L 375	REMOVE OR REPLACE F/FR-111 12A16849 OR 12A16879 TEST STATION RF AMPLIFIER SRU'S	4.78	33.8	5.46
P 554	CALIBRATE F/FR-111 ELECTRICAL TEST STATION METERS	4.78	42.3	4.28
L 371	REMOVE OR REPLACE F/FR-111 HF ANTENNA COUPLER SRU'S	4.74	54.9	5.07
P 538	BENCHCHECK F/FR-111 ANTICOLLISION LIGHTS	4.74	78.9	4.06
E 142	ANNOTATE UNSERVICEABLE (CONDEMNED) TAG MATERIEL FORMS (DD FORM 1577)	4.70	49.3	3.17
M 209	PERFORM QUALITY ASSURANCE (QA) OR QUALITY CONTROL (QC) INSPECTIONS OF TEST STATIONS, TEST EQUIPMENT, OR LRU'S	4.70	33.8	5.09
M 388	ALIGN F/FR-111 12A1803A1 TEST STATION SIGNAL SIMULATE AND MEASURE PANELS	4.70	31.0	5.35
K 276	ISOLATE MALFUNCTIONS IN F/FR-111 ARC-164 UHF RECEIVER TRANSMITTERS TO BIT AND PIECE	4.65	29.6	6.10
G 181	MAINTAIN TOOL BOXES OR CONSOLIDATED TOOL KITS (CTK)	4.56	43.7	3.86
M 192	BENCHCHECK EMERGENCY RADIOS	4.56	43.7	3.73
K 277	ISOLATE MALFUNCTIONS IN F/FR-111 ARC-164 UHF RADIO SET CONTROLS TO PIT AND PIECE	4.56	31.0	5.74
M 213	REMOVE OR INSTALL TEST REPLACEABLE UNITS (TRU'S)	4.52	64.8	3.40
M 494	REMOVE OR REPLACE F/FR-111 MODE IV COMPUTER SRU'S	4.48	35.2	4.56
D 94	CONDUCT OJT	4.44	19.7	5.35
M 207	PERFORM PERIODIC INSPECTIONS OF TEST EQUIPMENT	4.44	84.5	4.19

TABLE 23 (CONTINUED)

## POI 348R32635A MATCHED WITH SURVEY DATA

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D TSM	TITLES	T.E XSA ED*	1ST ENL (M)	T.O XSA (F)
K 279	REMOVE OR REPLACE F/FR-111 ARC-164 TEST SET BITS AND PIECES	4.44	36.6	4.46
E 131	ANNOTATE RECEIPT OF LRU'S INTO OR OUT OF SHOP ON FORMS SUCH AS REPAIR CYCLE CONTROL LOG FORMS (AF FORM 2520)	4.39	36.6	2.77
F 169	PREPARE MATERIAL DEFICIENCY REPORTS	4.39	46.5	4.89
G 174	CALIBRATE TORQUE WRENCHES	4.35	31.0	3.79
M 196	INSPECT EQUIPMENT FOR CORRECT CALIBRATION DATES	4.35	77.5	1.98
L 377	REMOVE OR REPLACE F/FR-111 12A16849 OR 12A16879 TEST STATION ARTIFICIAL ANTENNA SRU'S	4.35	42.3	5.15
L 378	REMOVE OR REPLACE F/FR-111 12A16849 OR 12A16879 TEST STATION ARTIFICIAL ANTENNA BITS AND PIECES	4.35	49.3	5.63
O 507	BENCHMECH F/FR-111 ARN-118 TACAN RECEIVER TRANSMITTER CONTROLS	4.35	26.8	4.68
F 160	ORDER PARTS BY TELEPHONE	4.26	78.9	3.19
K 281	REMOVE OR REPLACE F/FR-111 ARC-164 UHF RADIO SET CONTROL BITS AND PIECES	4.26	35.2	4.52
L 373	REMOVE OR REPLACE F/FR-111 12A16849 OR 12A16879 TEST STATION EXCITER SRU'S	4.26	39.4	5.03
C 85	REVIEW MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349) FOR ACCURACY	4.22	14.1	4.84
F 165	PREPARE QUALITY DEFICIENCY REPORTS	4.22	40.8	4.39
P 542	BENCHMECH F/FR-111 FUEL QUANTITY INTERMEDIATE DEVICES	4.22	64.8	4.25
M 200	ISOLATE MALFUNCTIONS IN EMERGENCY RADIOS TO SRU	4.17	23.9	4.08
M 205	PERFORM CORROSION CONTROL OF TEST STATIONS, TEST EQUIPMENT, OR LRU'S	4.17	71.8	3.88
M 391	BENCHMECH F/FR-111 ENGINE PRESSURE RATIO TRANSMITTERS	4.17	49.3	4.39
P 531	ALIGN F/FR-111 HIGH LIFT POSITION MECHANISMS	4.17	45.1	4.32
J 252	ISOLATE MALFUNCTIONS IN F/FR-111 ARC-109 UHF RECEIVER TRANSMITTERS TO BIT AND PIECE	4.13	47.9	7.09
L 374	REMOVE OR REPLACE F/FR-111 12A16849 OR 12A16879 TEST STATION EXCITER BITS AND PIECES	4.13	36.6	5.92
M 445	SAFETY WIRE F/FR-111 CENTRAL AIR DATA COMPUTER SRU'S	4.13	56.3	3.21
O 508	BENCHMECH F/FR-111 APN-118 TACAN RECEIVER TRANSMITTER ADAPTERS	4.09	16.9	4.77
P 529	ALIGN F/FR-111 FUEL QUANTITY INTERMEDIATE DEVICES	4.09	43.7	4.26
P 553	BENCHMECH F/FR-111 SELECT AND TOTAL FUEL INDICATORS	4.09	59.2	4.05
K 283	REMOVE OR REPLACE F/FR-111 ARC-164 UHF RECEIVER TRANSMITTER BITS AND PIECES	4.04	33.8	4.96
M 380	ALIGN F/FR-111 CENTRAL AIR DATA COMPUTERS	4.04	19.7	6.04
M 201	ISOLATE MALFUNCTIONS IN EMERGENCY RADIOS TO BIT AND PIECE	4.00	14.3	4.84
N 446	ALIGN F/FR-111 APX-76 AIR-TO-AIR INTERROBATOR (AAI) RECEIVER TRANSMITTERS	4.00	8.5	6.74
M 392	BENCHMECH F/FR-111 ENGINE PRESSURE SENSORS	3.96	16.9	4.00
M 214	REMOVE OR REPLACE EMERGENCY RADIO BITS AND PIECES	3.91	16.9	3.56
P 545	BENCHMECH F/FR-111 HIGH LIFT POSITION MECHANISMS	3.91	52.1	4.36
O 504	BENCHMECH F/FR-111 APN-118 TACAN ELECTRICAL EQUIPMENT MOUNTING BASES	3.87	14.1	4.93



TABLE 23 (CONTINUED)

POI 34BR32635A MATCHED WITH SURVEY DATA

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D TSK	TITLE	T.E XSA *DO	IST ENL (M)	T.O XSA (F)
0 532	BENCHCHECK F/FB-111 ARN-84 TACAN SYSTEM RECEIVER TRANSMITTERS	3.87	29.6	5.00
M 199	INVENTORY TEST STATIONS OR ROLLAWAYS	3.83	85.9	2.95
M 385	ALIGN F/FB-111 SUBSYSTEM TIE-IN TEST SETS	3.83	22.5	5.59
M 450	ALIGN F/FB-111 TS-1843A/B TEST SETS	3.83	9.9	5.21
0 505	BENCHCHECK F/FB-111 ARN-118 TACAN HORIZONTAL SITUATION INDICATORS	3.83	9.9	5.02
6 178	MAINTAIN NUCLEAR, BIOLOGICAL, AND CHEMICAL WARFARE EQUIPMENT	3.78	7.0	3.87
M 223	REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR MINOR HARDWARE	3.78	78.9	2.55
M 407	ISOLATE MALFUNCTIONS IN F/FB-111 SUBSYSTEM TIE-IN TEST SETS TO SRU OR CHASSIS	3.78	23.9	5.56
0 503	ALIGN F/FB-111 ARN-84 TACAN SYSTEM RECEIVER TRANSMITTERS	3.78	14.1	5.85
L 288	ALIGN F/FB-111 ARC-112 HF RECEIVER TRANSMITTERS	3.74	18.3	5.95
M 408	ISOLATE MALFUNCTIONS IN F/FB-111 SUBSYSTEM TIE-IN TEST SETS TO BIT AND PIECE	3.74	19.7	6.07
J 238	ALIGN F/FB-111 ARC-109 UHF RECEIVER TRANSMITTERS	3.70	56.3	5.64
J 250	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-109 UHF RADIO SET CONTROL LRU'S TO BIT AND PIECE	3.70	53.5	6.10
L 285	ALIGN F/FB-111 ARC-112 HF AMPLIFIER POWER SUPPLIES	3.70	16.9	6.01
M 487	BENCHCHECK F/FB-111 APX-76 IFF RADIO SET CONTROLS	3.70	15.5	4.68
M 488	REMOVE OR REPLACE F/FB-111 APX-76 AAI RECEIVER TRANSMITTER SRU'S	3.70	7.0	5.00
F 156	MAINTAIN TECHNICAL ORDER FILES	3.65	18.3	4.26
M 210	PERFORM TIME COMPLIANCE TECHNICAL ORDER (TCOT) INSPECTIONS OR MODIFICATIONS OF TEST STATIONS, TEST EQUIPMENT, OR LRU	3.65	29.6	5.30
M 212	PRESSURIZE LRU'S	3.65	87.3	2.53
M 429	REMOVE OR REPLACE F/FB-111 SUBSYSTEM TIE-IN TEST SET SRU'S	3.65	23.9	4.59
M 466	ISOLATE MALFUNCTIONS IN F/FB-111 APX-76 AAI RECEIVER TRANSMITTERS TO SRU OR CHASSIS	3.65	5.6	7.16
P 534	ALIGN F/FB-111 POSITION MECHANISM ASSEMBLIES	3.61	12.7	4.53
D 97	COUNSEL TRAINEES ON TRAINING PROGRESS	3.56	8.5	5.09
M 215	REMOVE OR REPLACE EMERGENCY RADIO SRU'S	3.56	16.9	3.14
L 287	ALIGN F/FB-111 ARC-112 HF RADIO SET CONTROLS	3.56	16.9	4.92
M 395	BENCHCHECK F/FB-111 SUBSYSTEM TIE-IN TEST SETS	3.56	26.8	4.97
M 430	REMOVE OR REPLACE F/FB-111 SUBSYSTEM TIE-IN TEST SET BITS AND PIECES	3.56	21.1	4.92
M 394	BENCHCHECK F/FB-111 STANDBY ALTIMETERS	3.52	43.7	4.05
M 448	ALIGN F/FB-111 APX-76 AAI SYNCHRONIZERS	3.52	7.0	6.35
M 473	ISOLATE MALFUNCTIONS IN F/FB-111 MODE IV INTERROGATOR TEST SETS TO SRU OR CHASSIS	3.52	19.7	4.81
0 501	ALIGN F/FB-111 ARN-118 TACAN RECEIVER TRANSMITTER ADAPTERS	3.52	7.0	5.24
G 183	PACK OR UNPACK LINE REPLACEABLE UNITS (LRU'S) OR SHOP REPLACEABLE UNITS (SRU'S) FOR SHIPMENT	3.48	64.8	2.82
I 234	REMOVE OR REPLACE F/FB-111 SIMULATOR OR MOCKUP CABLE ASSEMBLY PINS OR HARDWARE	3.48	36.6	4.10
J 237	ALIGN F/FB-111 ARC-109 UHF RADIO SET CONTROL LRU'S	3.48	47.9	4.58

TABLE 23 (CONTINUED)

POI 348932635A MATCHED WITH SURVEY DATA

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D TSK	TITLES	T.E XSA *0*	1ST EML (M)	T.D XSA (F)
M 387	ALIGN F/FB-111 12A1803A1 TEST STATION ANGLE POSITION INDICATORS	3.48	29.6	5.47
N 459	BENCHCHECK F/FB-111 IS-1843A/B TEST SETS	3.48	14.1	4.33
N 487	REMOVE OR REPLACE F/FB-111 APX-76 AAI RECEIVER TRANSMITTER BITS AND PIECES	3.48	8.5	5.48
O 519	ISOLATE MALFUNCTIONS IN F/FB-111 ARM-84 TACAN SYSTEM RECEIVER TRANSMITTERS TO SRU OR CHASSIS	3.48	25.4	5.61
P 561	ISOLATE MALFUNCTION IN F/FB-111 HIGH LIFT POSITION MECHANISMS	3.48	39.4	4.45
L 126	ANNOTATE MATERIAL DEFICIENCY EXHIBIT FORMS (AFTO FORM 114)	3.44	28.2	3.95
L 286	ALIGN F/FB-111 ARC-112 HF MOUNTS	3.44	9.9	4.59
L 304	BENCHCHECK F/FB-111 ARC-112 HF RECEIVER TRANSMITTERS	3.44	19.7	4.63
N 447	ALIGN F/FB-111 APX-76 AAI SWITCH AMPLIFIERS	3.44	7.0	6.35
N 478	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-239/A TEST SETS TO SRU OR CHASSIS	3.44	15.5	5.24
P 541	BENCHCHECK F/FB-111 ENGINE FUEL CONTROL MACH UNIT TRIM SETS	3.44	26.8	4.19
G 176	MAINTAIN INTERPHONE GROUND CORDS AND HEADSETS	3.39	46.5	3.19
L 301	BENCHCHECK F/FB-111 ARC-112 HF AMPLIFIER POWER SUPPLIES	3.39	18.3	5.27
O 509	BENCHCHECK F/FB-111 ARM-84 TACAN ELECTRICAL EQUIPMENT MOUNTING BASES	3.39	11.3	4.66
P 540	BENCHCHECK F/FB-111 DUAL INDICATING OIL QUANTITY DETECTORS	3.39	50.7	4.01
G 186	PREPARE AND PACK AVIONICS AND SUPPORT EQUIPMENT FOR MOBILITY OPERATIONS	3.35	25.4	3.90
J 242	BENCHCHECK F/FB-111 ARC-109 UNF RADIO SET CONTROL LRU'S	3.35	60.6	4.02
L 324	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-112 HF RECEIVER TRANSMITTERS TO BIT AND PIECE	3.35	14.1	7.01
P 573	REMOVE OR REPLACE F/FB-111 HIGH LIFT POSITION MECHANISM BITS AND PIECES	3.35	32.4	4.50
M 191	ALIGN F/FB-111 12A6659-2 TAPE READER UNITS	3.30	16.9	4.53
J 253	ISOLATE MALFUNCTIONS IN F/FB-111 ARM-134 TEST SETS	3.30	7.0	6.02
L 323	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-112 HF RECEIVER TRANSMITTERS TO SRU OR CHASSIS	3.30	15.5	6.11
N 480	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-245 TEST SETS TO SRU OR CHASSIS	3.30	9.9	5.55
N 486	REMOVE OR REPLACE F/FB-111 APX-76 AAI RADIO SET CONTROL BITS AND PIECES	3.30	7.0	4.94
O 510	BENCHCHECK F/FB-111 ARM-84 TACAN RADIO SET CONTROLS	3.30	29.6	4.50
O 513	ISOLATE MALFUNCTIONS IN F/FB-111 ARM-84 ELECTRICAL EQUIPMENT MOUNTING BASES TO SRU OR CHASSIS	3.30	7.0	5.15
J 262	REMOVE OR REPLACE F/FB-111 ARC-109 UNF RADIO SET CONTROL LRU BITS AND PIECES	3.26	56.3	4.98
L 299	BENCHCHECK F/FB-111 APX-78 RADAR BEACON TRANSPONDER RECEIVER TRANSMITTERS	3.26	16.9	4.94
L 303	BENCHCHECK F/FB-111 APC-112 HF RADIO SET CONTROLS	3.26	19.7	4.48
L 317	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-112 HF AMPLIFIER POWER SUPPLIES TO SRU OR CHASSIS	3.26	16.9	4.00

TABLE 23 (CONTINUED)

## POI 3A0832635A MATCHED WITH SURVEY DATA

59

O TSK	TITLES	T.E XSA +D*	1ST ENL (M)	T.O XSA (F)
L 319	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-112 HF MOUNTS TO SRU OR CHASSIS	3.26	12.7	4.80
L 348	REMOVE OR REPLACE F/FB-111 APX-78 RADAR BEACON TRANSPONDER SYSTEM RECEIVER TRANSMITTER SRU'S	3.26	16.9	5.81
O 511	BENCHCHECK F/FB-111 ARN-84 TACAN SERIAL TO PARALLEL CONVERTERS	3.26	16.9	4.61
L 318	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-112 HF AMPLIFIER POWER SUPPLIES TO BIT AND PIECE	3.22	14.1	5.70
L 321	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-112 HF RADIO SET CONTROLS TO SRU OR CHASSIS	3.22	16.9	5.82
N 465	ISOLATE MALFUNCTIONS IN F/FB-111 APX-76 AAI RECEIVER TRANSMITTERS TO BIT AND PIECE	3.22	5.6	7.73
N 479	ISOLATE MALFUNCTIONS IN F/FB-111 UPM-245 TEST SETS TO BIT AND PIECE	3.22	9.9	5.48
P 544	BENCHCHECK F/FB-111 FUSELAGE FUEL INDICATORS	3.22	50.7	4.20
L 284	ALIGN F/FB-111 APX-78 RADAR BEACON TRANSPONDER RECEIVER TRANSMITTERS	3.17	15.5	5.19
L 322	ISOLATE MALFUNCTIONS IN F/FB-111 ARC-112 HF RADIO SET CONTROLS TO BIT AND PIECE	3.17	15.5	5.66
N 467	ISOLATE MALFUNCTIONS IN F/FB-111 APX-76 AAI SWITCH AMPLIFIERS TO SRU OR CHASSIS	3.17	5.6	6.58
N 490	REMOVE OR REPLACE F/FB-111 APX-76 AAI SWITCH AMPLIFIER SRU'S	3.17	8.5	4.97
N 492	REMOVE OR REPLACE F/FB-111 APX-76 AAI SYNCHRONIZER SRU'S	3.17	7.0	4.86
O 502	ALIGN F/FB-111 ARN-84 TACAN SERIAL TO PARALLEL CONVERTERS	3.17	7.0	4.92
P 530	ALIGN F/FB-111 FUSELAGE FUEL INDICATORS	3.17	25.4	4.47
P 547	BENCHCHECK F/FB-111 LIQUID OXYGEN QUANTITY INDICATORS	3.17	29.6	4.05
P 549	BENCHCHECK F/FB-111 OIL PRESSURE INDICATORS	3.17	36.6	4.00
C 80	PREPARE APR'S	3.13	7.0	6.04
G 188	SET UP AVIONICS AND SUPPORT EQUIPMENT AT MOBILITY OPERATING AREAS	3.13	15.5	5.23
L 300	BENCHCHECK F/FB-111 APX-78 RADAR BEACON TRANSPONDER RADIO SET CONTROLS	3.13	15.5	4.12
N 469	ISOLATE MALFUNCTIONS IN F/FB-111 APX-76 AAI SYNCHRONIZERS TO SRU OR CHASSIS	3.13	5.6	6.10
G 189	SET UP AVIONICS AND SUPPORT EQUIPMENT FOR NORMAL OPERATION AFTER MOBILITY OPERATIONS	3.09	19.7	4.72
M 203	ISOLATE MALFUNCTIONS IN F/FB-111 12A6659-2 TAPE READER UNITS TO SRU OR CHASSIS	3.09	11.3	5.47
L 302	BENCHCHECK F/FB-111 APC-112 HF MOUNTS	3.09	14.1	4.45
L 314	ISOLATE MALFUNCTIONS IN F/FB-111 APX-78 RADAR BEACON TRANSPONDER RECEIVER TRANSMITTERS TO SRU OR CHASSIS	3.09	14.1	5.92
L 316	ISOLATE MALFUNCTIONS IN F/FB-111 APX-78 RADAR BEACON TRANSPONDER RADIO SET CONTROLS TO BIT AND PIECE	3.09	11.3	4.64
M 386	ALIGN F/FB-111 TEPRAIN FOLLOWING RADAR (TFR) TEST SETS	3.09	7.0	5.59
N 455	BENCHCHECK F/FB-111 APX-76 AAI SWITCH AMPLIFIERS	3.09	2.5	5.82
N 456	BENCHCHECK F/FB-111 APX-76 AAI SYNCHRONIZERS	3.09	7.0	5.62

### AFS 326X5B

Analysis of First Enlistment Personnel. Tasks performed by the greatest percentages of 326X5B first enlistment incumbents are presented on Table 24. Generally, these most common tasks involve benchchecking or troubleshooting F-15 indicators and controls assigned to the AN/GSM-229 test station or maintaining AN/GSM-228 Antenna A and B test stations and assigned LRUs. Since 87 percent of the first enlistment respondents grouped into one job type (GRP061), the functions performed by these incumbents are stable regardless of their duty location. In addition to an analysis of tasks performed, the various pieces of Avionics AGE test equipment or test equipment groups and specialized tools utilized by first enlistment AFS 326X5B personnel were examined. Three test stations, AN/GSM-228, AN/GSM-229, and AN/GSM-230 are all utilized by 96 percent or more of the first-termers (see Table 25). Each of these test stations are utilized in the resident technical training course. Table 26 reveals that 22 pieces of special equipment or tools are utilized by 30 percent or more of the first enlistment personnel, many of which are also common to AFS 326X5A first term respondents. Items, such as compressed gas bottles, pressure regulators, RF crystal detectors, environmental chambers and pressure test sets for LRUs, are however, more applicable to the 326X5B specialty incumbents. Overall, 326X5B first enlistment personnel perform primarily a test station operator function, benchchecking components, with very little variation in the type of job available for them to perform.

Analysis of Training Emphasis and Task Difficulty. Forty-six senior NCOs assigned to F-15 integrated avionics manual test station shops rated the relative training emphasis or task difficulty of each F-15 task in the inventory. These ratings were then compiled to produce an ordered listing of all tasks in terms of their recommended emphasis in training for first enlistment AFS 326X5B personnel and their task difficulty. For a more complete description of these ratings, see the Task Factor Administration subsection in the SURVEY METHODOLOGY section of this report.

All the tasks in the inventory concerning maintenance of the F-15 AN/GSM-228 Antenna A or B test stations, and the F-15 AN/GSM-230 test station, and assigned LRUs were rated above average in training emphasis. As seen on Table 27, the tasks related to Antenna A and B test stations have the highest ratings. Tasks related to maintaining F-15 Indicators and Controls assigned to the AN/GSM-229 test station were rated average in training emphasis.

As with the training emphasis, technical equipment specific tasks were rated most difficult. For AFS 326X5B incumbents the most difficult tasks revolve around the maintenance of generator control units, integrated communications control panels, radar systems, APX-76, ARC-109 UHF, or APX-101 radio-receiver transmitters, ILS test sets, or AN/GSM-228 test stations. Tasks rated high in difficulty but not performed by 30 percent or more of the specialty were primarily training, and supervisory or managerial in nature, and rated low in training emphasis. This includes functions, such as preparing APR's, preparing CDCs, preparing lesson plans, evaluating or determining budget or financial plans, and developing inputs to mobility plans. Many of the supervisory or managerial tasks were also rated average in task difficulty. Technical tasks rated average in difficulty centered on

TABLE 24

TASKS MOST COMMONLY PERFORMED BY FIRST  
ENLISTMENT 326X5B PERSONNEL

TASK	PERCENT MEMBERS PERFORMING (N=75)
H197 INSTALL CAPS, PLUGS, OR DUST COVERS ON TEST STATIONS, TEST EQUIPMENT, OR LRUs	93
*R649 BENCHCHECK F-15 RADAR SYSTEM TRANSMITTERS	91
*R647 BENCHCHECK F-15 RADAR SYSTEM ANTENNAS	91
H225 VISUALLY INSPECT AND CLEAN LRUs	92
*R648 BENCHCHECK F-15 RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES	91
H226 VISUALLY INSPECT AND CLEAN TEST STATIONS	91
T721 BENCHCHECK F-15 MAIN COMMUNICATIONS CONTROL PANELS	91
T712 BENCHCHECK F-15 FUEL QUANTITY INDICATORS	92
*H204 PERFORM CONFIDENCE CHECKS OF TEST STATIONS	92
*T715 BENCHCHECK F-15 INTEGRATED COMMUNICATIONS CONTROL PANELS	89
T692 ADJUST F-15 CONTROLLER AIRCRAFT GRIP ASSEMBLIES	89
*T713 BENCHCHECK F-15 GENERATOR CONTROL UNITS	89
*T705 BENCHCHECK F-15 CAUTION LIGHT LOGIC UNITS	89
*S679 BENCHCHECK F-15 ILS TEST SETS	91
T704 BENCHCHECK F-15 CAUTION LIGHT DISPLAY UNITS	89
*R653 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM TRANSMITTERS	88
*R651 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM ANTENNAS	88
*T722 BENCHCHECK F-15 MOTION PICTURE CAMERAS	88
*T749 ISOLATE MALFUNCTIONS IN F-15 MOTION PICTURE CAMERAS	88
*T746 ISOLATE MALFUNCTIONS IN F-15 INTEGRATED COMMUNICATIONS CONTROL PANELS	88
*H208 PERFORM PERIODIC INSPECTIONS OF TEST STATIONS	88
*R652 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES	88
*R644 ALIGN F-15 RADAR SYSTEM ANTENNAS	87
*T714 BENCHCHECK F-15 IDENTIFICATION FRIEND-OR-FOE (IFF) CONTROL PANELS	87
T745 ISOLATE MALFUNCTIONS IN F-15 IFF CONTROL PANELS	87
*R657 SERVICE F-15 AN/GSM-228 TEST STATION HYDRAULIC POWER SUPPLIES	87
*646 ASSEMBLE OR DISASSEMBLE F-15 RADAR SYSTEM ANTENNAS	85
*T694 ALIGN F-15 INTEGRATED COMMUNICATIONS CONTROL PANELS	85
T707 BENCHCHECK F-15 CONTROLLER AIRCRAFT GRIP ASSEMBLIES	85
*T741 ISOLATE MALFUNCTIONS IN F-15 CAUTION LIGHT LOGIC UNITS	85
T702 BENCHCHECK F-15 BUILT-IN-TEST CONTROL/DISPLAY PANELS	85
*R656 SERVICE F-15 AN/GSM-228 TEST STATION FLUSH AND FILL UNITS	87

\*TASKS ALSO RATED HIGH IN TRAINING EMPHASIS BY F-15 RATERS

TABLE 25

AVIONICS AGE TEST STATIONS OR TEST EQUIPMENT GROUPS  
UTILIZED BY AFS 326X5B FIRST ENLISTMENT PERSONNEL  
(30 PERCENT OR MORE UTILIZING)

<u>EQUIPMENT</u>	<u>PERCENT FIRST ENLISTMENT MEMBERS USING</u>
*COMMUNICATIONS, NAVIGATION, AND IDENTIFICATION TEST STATIONS (AN/GSM-230)	97
*INDICATORS AND CONTROLS TEST STATIONS (AN/GSM-229)	97
*ANTENNA A OR B TEST STATIONS (AN/GSM-228)	96
*RADAR TEST SETS AN/UPM-137	87
*INSTRUMENT LANDING SYSTEM (ILS) TEST SETS	85
EMERGENCY RADIO TEST EQUIPMENT GROUPS (AN/URM-95A)	65
*IDENTIFICATION FRIEND-OR-FOE (IFF) MODE IV COMPUTER TEST EQUIPMENT GROUP (KIR/KIT)	53
*USED IN 3ABR32635B COURSE	

TABLE 26

SPECIAL TOOLS OR EQUIPMENT UTILIZED BY AFS 326X5B  
FIRST ENLISTMENT PERSONNEL  
(30 PERCENT OR MORE UTILIZING)

<u>EQUIPMENT</u>	<u>PERCENT FIRST ENLISTMENT MEMBERS USING</u>
MULTIMETERS (PSM-6, 410C, MULTIMETERS)	97
SOLDERING OR DESOLDERING TOOLS	95
OSCILLOSCOPES	92
SPECTRUM ANALYZERS	88
CONNECTOR REPAIR KITS	88
COMPRESSED GAS BOTTLES	88
TORQUE WRENCHES OR TORQUE SCREWDRIVERS	87
SIGNAL GENERATORS	85
RF VARIABLE ATTENUATORS	79
TIRE PUMPS AND GAUGES	77
DUMMY LOADS	71
POWER MEASURING DEVICES	71
RF POWER AMPLIFIERS	69
PULSE GENERATORS	69
RF MULTIMETERS	67
PRESSURE REGULATORS	67
RF CRYSTAL DETECTORS	67
FREQUENCY MEASURING DEVICES (OFF-EQUIPMENT)	51
ENVIRONMENTAL CHAMBERS	37
PRESSURE TEST SETS FOR LRUs	33
PHASE SENSITIVE VOLTMETERS (PSVM/PVM)	33
DIFFERENTIAL VOLTMETERS	31

TABLE 27

TASKS RATED HIGHEST IN TRAINING EMPHASIS FOR  
AFS 326X5B FIRST ENLISTMENT PERSONNEL

TASK	TRAINING* EMPHASIS	PERCENT FIRST-TERMERS PERFORMING	TASK** DIFFICULTY
R651 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM ANTENNAS	7.1	88	6.5
R653 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM TRANSMITTERS	7.1	88	6.5
R647 BENCHCHECK F-15 RADAR SYSTEM ANTENNAS	7.0	91	6.0
R649 BENCHCHECK F-15 RADAR SYSTEM TRANSMITTERS	7.0	91	6.1
E124 ANNOTATE MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	6.7	65	4.9
R645 ALIGN F-15 RADAR SYSTEM TRANSMITTERS	6.7	84	6.0
R644 ALIGN F-15 RADAR SYSTEM ANTENNAS	6.6	87	6.0
R646 ASSEMBLE OR DISASSEMBLE F-15 RADAR SYSTEM ANTENNAS	6.6	85	7.5
R650 CALIBRATE F-15 AN/GSM-228 TEST STATIONS	6.5	83	6.6
R654 SERVICE F-15 AN/GSM-228 TEST STATION COOLANT AND CONDITIONING UNITS WITH REFRIGERATION	6.4	72	7.3
R652 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES	6.4	88	5.3
S669 BENCHCHECK F-15 APX-76 RADIO-RECEIVER TRANSMITTERS	6.3	81	5.9
R648 BENCHCHECK F-15 RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES	6.3	91	5.2
S682 ISOLATE MALFUNCTIONS IN F-15 APX-76 RADIO-RECEIVER TRANSMITTERS	6.2	81	6.5
R655 SERVICE F-15 AN/GSM-228 TEST STATION COOLING AND CONDITIONING UNITS WITH COOLANT OIL	6.1	85	5.0
R656 SERVICE F-15 AN/GSM-228 TEST STATION FLUSH AND FILL UNITS	6.1	81	5.4
F166 RESEARCH MANUALS FOR PART NUMBERS	6.0	77	6.7
S659 ALIGN F-15 APX-76 RADIO-RECEIVER TRANSMITTERS	6.0	79	6.7
R657 SERVICE F-15 AN/GSM-228 TEST STATION HYDRAULIC POWER SUPPLIES	6.0	87	5.2
H204 PERFORM CONFIDENCE CHECKS OF TEST STATIONS	5.9	92	4.2

\*AVERAGE T.E. RATING = 1.3 (S.D. = 2.6)

\*\*AVERAGE T.D. RATING = 5.0 (S.D. = 1.0)

maintenance of the AN/GSM-230 test station and assigned LRUs, while general maintenance, and many of the indicators and controls assigned to the AN/GSM-229 test station were low in task difficulty.

Specialty Training Standard Analysis. Items in the April 1979 STS were compared to survey data. Like the 326X5A STS, the 326X5B STS is also organized around specific Avionics AGE test equipment utilized by shred incumbents. All equipment responded to by AFS 326X5B personnel in the occupational survey are included in the STS. Inventory tasks not referenced to the STS were general in nature or related to supply functions. Almost all equipment specific tasks were referenced to the STS, indicating the STS portrays an accurate picture of the types of equipment and related tasks F-15 Manual Test station shop personnel perform.

Plan of Instruction (POI) Analysis. The 326X5B POI, dated April 1980, for the 95 day Integrated Avionics Manual Test Station and Component Specialist Course taught at Lowry AFB, Colo., was also reviewed against the survey data. The POI contains the qualitative requirements for course 3ABR32635B, in terms of criterion objectives for each unit of instruction, and shows time, training standard correlation, support materials, and lesson plans. Topics covered in the course include electronics principles; F-15 Integrated Avionics Maintenance; Communication, Navigation and Identification (CNI) Test Station and LRU Theory; Indicators and Controls (I & C) Test Station and LRU Theory; I & C and CNI Shop; Antenna A and B test stations and LRU Theory; with an Intermediate Avionics Shop Practical. Each of the items of equipment are utilized by over 50 percent of the first enlistment respondents. These data suggest that the POI is very accurate in training the basic requirements needed for AFS 326X5B personnel.

Several tasks were, however, performed by at least 30 percent of the first enlistment respondents and rated high in training emphasis, but not annotated to the POI (see Table 28). Many of these tasks relate to UHF Radios (ARC-109 or ARC-164), TACAN (ARN-118) systems, and general LRU maintenance or forms annotation. The tasks listed as not referenced should be reviewed by training personnel to determine their relevancy in training.



TABLE 28

TASKS NOT REFERENCED TO POI 3ABR32625B

D TSK	TITLES	T-1 X5B #0*	IST ENL (M)	T-0 X5B (F)
----- TASKS NOT REFLENCEU -----				
R 046	ASSEMBLE ON DISASSEMBLE F-15 RADAR SYSTEM ANTENNAS	6.61	85.3	7.48
R 056	SERVICE F-15 AN/GSM-228 TEST STATION FLUSH AND FILL UNITS	6.09	86.7	5.37
F 166	RESEARCH MANUALS FOR PART NUMBERS	6.00	77.3	4.32
R 057	SERVICE F-15 AN/GSM-228 TEST STATION HYDRAULIC POWER SUPPLIES	5.96	86.7	5.21
F 167	RESEARCH MICROFILM FOR PART INFORMATION	5.78	81.3	4.09
M 222	REMOVE OR REPLACE TEST STATION CABLE ASSEMBLY PINS OR HARDWARE	5.61	73.3	6.04
E 136	ANNOTATE SIGNIFICANT HISTORICAL DATA FORMS (AFTO FORM 95)	5.56	60.0	3.51
E 138	ANNOTATE SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORMS 244 AND 245)	5.56	40.0	4.18
M 206	PERFORM PERIODIC INSPECTIONS OF TEST STATIONS	5.44	88.0	4.76
S 690	ISOLATE MALFUNCTIONS IN F-15 ILS TEST SET LRU'S TO BIT AND PIECE	5.26	82.7	6.55
M 206	PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I) OF LRU'S ISSUED FROM SUPPLY	5.17	70.7	5.12
S 683	ISOLATE MALFUNCTIONS IN F-15 ARC-109 UHF RADIO RECEIVERS	5.13	69.3	5.63
D 98	DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	5.04	22.7	4.42
S 685	ISOLATE MALFUNCTIONS IN F-15 ARC-164 UHF RADIO SYSTEMS TO SRU OR CHASSIS	5.04	61.3	4.91
E 137	ANNOTATE SUPPLY CONTROL LOG FORMS (AF FORM 2413)	5.00	44.0	3.53
D 94	CONDUCT OJT	4.96	14.7	5.81
C 85	REVIEW MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349) FOR ACCURACY	4.91	16.0	5.56
S 672	BENCHCHECK F-15 ARC-164 UHF RADIO-RECEIVER TRANSMITTERS	4.91	68.0	5.11
G 101	MAINTAIN TOOL BOXES OR CONSOLIDATED TOOL KITS (CTM)	4.83	48.0	4.34
S 660	ALIGN F-15 ARC-109 UHF RADIO RECEIVERS	4.83	69.3	5.71
S 662	ALIGN F-15 APC-164 UHF RADIO-RECEIVER TRANSMITTERS	4.78	58.7	5.17
S 670	BENCHCHECK F-15 ARC-109 UHF RADIO RECEIVERS	4.78	70.7	5.29
E 122	ANNOTATE ISSUE/TURN IN REQUEST FORMS (AF FORM 20051)	4.74	56.0	3.47
S 674	BENCHCHECK F-15 ARN-118 TACAN RADIO-RECEIVER TRANSMITTERS	4.74	60.0	4.96
T 692	ADJUST F-15 CONTROLLING AIRCRAFT GPIP ASSEMBLIES	4.74	89.3	4.88
M 213	REMOVE OR INSTALL TEST REPLACEABLE UNITS (TRU'S)	4.70	61.3	3.20
M 207	PERFORM PERIODIC INSPECTIONS OF TEST EQUIPMENT	4.65	73.3	4.63
E 135	ANNOTATE SERVICEABLE TAG-MATERIAL FORMS (OD FORM 1574)	4.61	53.3	3.33
F 164	PREPARE MATERIAL DEFICIENCY REPORTS	4.61	54.7	5.84
M 192	BENCHCHECK EMERGENCY RADIOS	4.61	64.0	4.41
F 160	ORDER PARTS BY TELEPHONE	4.56	81.3	2.89
M 209	PERFORM QUALITY ASSURANCE (QA) OR QUALITY CONTROL (QC) INSPECTIONS OF TEST STATIONS, TEST EQUIPMENT, OR LRU'S	4.56	46.7	5.58
M 218	REMOVE OR REPLACE F-15 TRU SRU'S	4.56	36.0	4.38
S 691	REMOVE OR REPLACE F-15 ILS TEST SET BITS AND PIECES	4.56	76.0	5.54
M 216	REMOVE OR REPLACE F-15 CHASSIS MOUNTED LRU COMPONENTS, SUCH AS FUSES, CIRCUIT BREAKERS, OR TRANSFORMERS	4.48	46.7	4.29
B 48	SUPERVISE APPRENTICE INTEGRATED AVIONICS MANUAL TEST STATION AND COMPONENT SPECIALISTS (F-15)(AFSC 326358)	4.39	28.0	5.65
M 200	ISOLATE MALFUNCTIONS IN EMERGENCY RADIOS TO SRU	4.39	30.7	5.16

TABLE 28 (CONTINUED)

POI 3ABR32635B MATCHED WITH SURVEY DATA

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D TSK	TITLES	T-E XSB #D*	1ST ENL (M)	T-D XSB (F)
M 205	PERFORM COMBINATION CONTROL OF TEST STATIONS, TEST EQUIPMENT, OR LRU'S	4.35	70.7	4.43
S 686	ISOLATE MALFUNCTIONS IN F-15 AWC-118 TACAN RADIO-RECEIVER TRANSMITTERS	4.35	54.7	5.21
E 131	ANNOTATE RECEIPT OF LRU'S INTO OR OUT OF SHOP ON FORMS SUCH AS REPAIR CYCLE CONTROL LOG FORMS (AF FORM 2520)	4.26	53.3	3.29
F 157	MAINTAIN TOOL STORAGE AREAS	4.13	30.7	4.75
S 663	ALIGN F-15 ARN-118 TACTICAL AIR NAVIGATION (TACAN) RADIO-RECEIVER TRANSMITTERS	4.13	52.0	5.03
S 673	BENCHMARK F-15 ARN-118 DIGITAL-TO-DIGITAL ADAPTER CONVERTERS	4.13	42.7	4.52
O 97	COUNSEL TRAINEES ON TRAINING PROGRESS	4.09	6.7	4.87
S 688	ISOLATE MALFUNCTIONS IN F-15 ELECTRONIC CONTROL AMPLIFIERS	4.09	62.7	5.07
T 743	ISOLATE MALFUNCTIONS IN F-15 CONTROLLER AIRCRAFT GRIP ASSEMBLIES	4.00	82.7	4.36
M 215	REMOVE OR REPLACE EMERGENCY RADIO SRU'S	3.96	17.3	4.69
T 738	ISOLATE MALFUNCTIONS IN F-15 BUILT-IN-TEST CONTROL/DISPLAY PANELS	3.96	82.7	5.09
M 190	ALIGN EMERGENCY RADIOS	3.91	44.0	5.23
S 677	BENCHMARK F-15 ELECTRONIC CONTROL AMPLIFIERS	3.91	62.7	5.05
T 737	ISOLATE MALFUNCTIONS IN F-15 AVIONICS STATUS PANELS	3.91	80.0	4.46
E 142	ANNOTATE UNSERVICEABLE (CONDEMNED) TAG MATERIAL FORMS (DD FORM 1577)	3.87	60.0	3.52
G 174	CALIBRATE TORQUE WRENCHES	3.87	33.3	4.01
M 223	REMOVE OR REPLACE TEST STATION LIGHT RULBS, FUSES, OR MINOR HARDWARE	3.87	81.3	2.62
T 695	BENCHMARK F-15 AIRCRAFT AIR TEMPERATURE ELECTRONIC CONTROL BOXES	3.87	69.3	4.55
M 217	REMOVE OR REPLACE F-15 LRU SRU'S EXCEPT RADAR SYSTEM SRU'S	3.83	29.3	4.31
T 707	BENCHMARK F-15 CONTROLLER AIRCRAFT GRIP ASSEMBLIES	3.83	85.3	4.58
T 716	BENCHMARK F-15 INTEGRATED NAVIGATIONAL AIDS CONTROL PANELS	3.83	81.3	4.50
T 732	BENCHMARK F-15 RADAR SET CONTROLS	3.83	69.3	4.24
F 165	PREPARE QUALITY DEFICIENCY REPORTS	3.78	26.7	5.01
T 700	BENCHMARK F-15 ALTITUDE INDICATORS	3.78	85.3	4.95
T 739	ISOLATE MALFUNCTIONS IN F-15 C-9013/APX CONTROL PANELS	3.78	66.7	4.73
E 143	ANNOTATE UNSERVICEABLE (REPARABLE) TAG MATERIAL FORMS (DD FORM 1577-2)	3.74	52.0	3.37
T 696	BENCHMARK F-15 AIRCRAFT LIGHT FLASHERS	3.74	46.7	4.15
T 690	BENCHMARK F-15 ALTITUDE INDICATORS	3.74	84.0	4.02
T 701	BENCHMARK F-15 AVIONICS STATUS PANELS	3.74	82.7	4.37
T 702	BENCHMARK F-15 BUILT-IN-TEST CONTROL/DISPLAY PANELS	3.74	85.3	4.51
M 194	CLEAN TEST STATION BLOWER FILTERS	3.70	85.3	2.34
T 697	BENCHMARK F-15 AIRSPEED MACH INDICATORS	3.70	82.7	4.02
T 699	BENCHMARK F-15 ANGLE-OF-ATTACK INDICATORS	3.70	80.0	4.10
T 708	BENCHMARK F-15 ELECTRICAL TACHOMETER INDICATORS	3.70	73.3	3.95
T 718	BENCHMARK F-15 LANDING GEAR CONTROL INDICATORS	3.70	77.0	4.39

TABLE 28 (CONTINUED)

P01 346R326355 MATCHED WITH SURVEY DATA

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D TSK	TITLES	T.F XSR #0*	IST FAL (H)	T.O XSR (F)
T 747	ISOLATE MALFUNCTIONS IN F-15 INTEGRATED NAVIGATION AIDS CONTROL PANELS	3.70	77.7	5.08
T 750	ISOLATE MALFUNCTIONS IN F-15 RADAR SET CONTROLS	3.70	69.3	4.83
T 751	ISOLATE MALFUNCTIONS IN F-15 TAKE COMMAND CONTROL PANELS	3.65	74.7	4.62
F 147	MAINTAIN BENCHSTOCK PARTS OR EQUIPMENT LEVELS	3.61	4.0	4.25
T 724	BENCHCHECK F-15 NOZZLE POSITION INDICATORS	3.61	72.0	3.79
T 725	BENCHCHECK F-15 NOZZLE POSITION TRANSMITTERS	3.61	73.3	4.50
T 727	BENCHCHECK F-15 OVERHEAT FIRE DETECTION ALARM CONTROLS	3.61	60.0	3.84
T 728	BENCHCHECK F-15 PITCH KATIO INDICATORS	3.61	57.3	3.75
T 729	BENCHCHECK F-15 POWER PLANT LEVER (LH) THROTTLE LEVER GRIPS	3.61	80.0	3.81
T 730	BENCHCHECK F-15 POWER PLANT RIGHTHAND (RH) THROTTLE LEVER GRIPS	3.61	82.7	3.81
T 731	BENCHCHECK F-15 PRESSURE TRANSMITTERS	3.61	52.0	4.89
T 703	BENCHCHECK F-15 C-9017/APX CONTROL PANELS	3.56	62.7	4.11
T 706	BENCHCHECK F-15 COMPASS CONTROLS	3.56	74.7	4.19
T 709	BENCHCHECK F-15 ENGAGING CONTROLLERS	3.56	73.3	4.32
T 711	BENCHCHECK F-15 FUEL LEVEL CONTROLS	3.56	61.3	4.32
T 733	BENCHCHECK F-15 RATE OF FUEL FLOW INDICATORS	3.56	70.7	3.69
T 735	BENCHCHECK F-15 TAKE COMMAND CONTROL PANELS	3.56	78.7	3.82
T 736	BENCHCHECK F-15 VERTICAL SPEED INDICATORS	3.56	76.0	3.72
T 742	ISOLATE MALFUNCTIONS IN F-15 COMPASS CONTROLS	3.56	68.0	4.44
T 710	BENCHCHECK F-15 FAN TURBINE INLET TEMPERATURE INDICATORS	3.52	78.7	2.80
T 726	BENCHCHECK F-15 OIL PRESSURE INDICATORS	3.52	72.0	4.06
F 152	MAINTAIN PRECISION MEASUREMENT EQUIPMENT (PME) CALIBRATION SCHEDULES	3.48	5.3	4.49
M 199	INVENTORY TEST STATIONS OP ROLLAWAYS	3.48	73.3	3.85
M 210	PERFORM TIME COMPLIANCE TECHNICAL ORDER (TCOT) INSPECTIONS OR MODIFICATIONS OF TEST STATIONS, TEST EQUIPMENT, OR LRU	3.48	60.3	6.00
M 212	PRESSURIZE LRUs	3.48	78.7	2.52
C 76	INITIATE UNSATISFACTORY REPORTS	3.44	16.0	5.84
C 183	PACK OR UNPACK LINE REPLACEABLE UNITS (LRU'S) OR SHOP REPLACEABLE UNITS (SRU'S) FOR SHIPMENT	3.44	73.3	3.39
T 717	BENCHCHECK F-15 INTERIOR LIGHT POWER SUPPLIES	3.44	49.3	4.26
M 201	ISOLATE MALFUNCTIONS IN EMERGENCY RADIOS TO BIT AND PIECE	3.39	14.7	6.45
M 214	REMOVE OR REPLACE EMERGENCY RADIO BITS AND PIECES	3.39	10.7	5.17
S 667	BENCHCHECK F-15 ANTENNA SELECTORS	3.39	56.0	3.96
T 734	BENCHCHECK F-15 SIGNAL CONDITIONERS	3.39	42.7	4.56
F 148	MAINTAIN DAILY DOCUMENT REGISTER OR ITEM SURVEILLANCE LISTS (LON)	3.35	6.7	4.78
F 170	VERIFY DUE-IN FROM MAINTENANCE (LHM) DOCUMENT LISTINGS (R-26)	3.35	6.7	5.21
C 79	PERFORM PRODUCTION OR SUPERVISORY INSPECTIONS OF LRUs	3.30	10.7	5.32
C 84	REVIEW EQUIPMENT RECORDS FOR ACCURACY	3.26	14.7	5.26
M 196	INSTALL TEST STATIONS IN WORK AREA	3.26	33.3	5.68
C 56	CERTIFY STATUS OF REPLACEABLE, SERVICEABLE, OR CONCERNED PARTS	3.22	20.0	4.40
F 171	VERIFY PRIORITY SWITCH EFFECTS (D-16)	3.22	10.7	5.14

TABLE 28 (CONTINUED)

POL 3ABR32635R MATCHED WITH SURVEY DATA

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U TSK	TITLE	T.E XSP #C*	1ST ENL (M)	1.0 XSB (F)
D 107	EVALUATE OJT TRAINEES	3.17	1.3	5.12
T 719	BENCHMARK F-15 LEVEL SENSING FUEL TRANSFERS	3.09	42.7	4.32
F 720	BENCHMARK F-15 LIQUID QUANTITY INDICATOR REPEATERS	3.09	41.3	4.38
F 168	RESEARCH SUPPLY PUBLICATIONS	3.04	18.7	5.41
G 182	OPERATE GROUND POWERED AEROSPACE GROUND EQUIPMENT (AGE), SUCH AS PU-4 CFMATERORS	3.04	34.7	3.75
G 188	SET UP AVIONICS AND SUPPORT EQUIPMENT AT MOBILITY OPERATING AREAS	3.04	24.0	6.72
G 189	SET UP AVIONICS AND SUPPORT EQUIPMENT FOR NORMAL OPERATION AFTER MOBILITY OPERATIONS	3.04	25.3	6.54
A 6	DETERMINE WORK PRIORITIES	3.00	16.0	4.40
G 180	MAINTAIN TEST EQUIPMENT STORAGE AREAS	3.00	50.7	3.77
C 80	PREPARE APN'S	2.96	2.7	7.08
F 149	MAINTAIN EQUIPMENT STATUS REPORTS	2.83	17.3	4.39
S 676	BENCHMARK F-15 AUTOMATIC DIRECTION FINDING (ADF) ANTENNAS	2.83	60.0	3.53
G 178	MAINTAIN NUCLEAR, BIOLOGICAL, AND CHEMICAL WARFARE EQUIPMENT	2.70	10.7	4.77
C 86	REVIEW TECHNICAL ORDER IMPROVEMENT REPORTS	2.65	4.0	5.62
E 126	ANNOTATE MATERIEL DEFICIENCY EXHIBIT FORMS (AFTO FORM 11a)	2.65	28.0	4.69
D 111	MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	2.61	10.7	5.21
F 151	MAINTAIN MASTER IDENTIFICATION (ID) LISTINGS	2.61	2.7	4.82
F 173	VERIFY SUPPLY GUE-OUT LISTINGS (M-30 OR R-35)	2.48	6.7	4.73
A 11	DEVELOP WORK METHODS OR PROCEDURES	2.44	10.7	5.70
E 120	ANNOTATE DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT FORMS (DD FORM 1348-1)	2.44	22.7	3.39
B 54	WRITE CORRESPONDENCE	2.39	2.7	5.90
M 211	PREPARE DEFECTIVE TEST STATION EQUIPMENT FOR SHIPMENT	2.35	50.7	4.36
A 16	ESTABLISH PUBLICATION LIBRARIES	2.26	4.0	5.70
B 31	COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED MATTERS	2.26	6.7	5.89
E 127	ANNOTATE NON-NSN REQUISITION (MANUAL) FORMS (DD FORM 1348-6)	2.26	8.0	5.03
A 9	DEVELOP SELF-INSPECTION PROGRAMS	2.13	6.7	6.13
A 15	ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	2.09	4.0	5.55
B 40	IMPLEMENT SAFETY PROGRAMS	2.04	1.3	5.16
F 155	MAINTAIN STATUS BOARDS, GRAPHS, OR CHARTS	2.04	26.7	4.56
A 3	COORDINATE JOB REQUIREMENTS WITH OTHER SECTIONS	1.96	9.3	4.66
B 45	INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	1.96	8.0	5.74
C 71	EVALUATE SAFETY PROGRAMS	1.91	2.7	4.83
B 36	DIRECT MAINTENANCE OF PUBLICATION LIBRARIES	1.87	4.0	5.48
F 161	PLACE TEST EQUIPMENT IN STORAGE AREAS	1.87	48.0	2.81
A 12	ESTABLISH CORRUSSION CONTROL PROGRAMS	1.83	2.7	5.13
F 105	ISSUE TEST EQUIPMENT FROM STORAGE	1.83	1.3	3.39
F 146	MAINTAIN ADMINISTRATIVE FILES	1.83	1.3	4.32
A 13	ESTABLISH INSPECTION PROCEDURES	1.78	4.0	5.71
C 55	ANALYZE WORKLOAD REQUIREMENTS	1.78	5.3	5.23
F 163	POLYMER INTERMEDIATE TEST-VOID REPORTS	1.78	16.0	5.82

### Training Comparisons

After reviewing the survey data presented individually for the AFS 326X5A and 326X5B specialties, several comparisons can be made to illustrate the commonality of these specialties. Several tasks, are performed by first-termers in both specialties:

- install caps, plugs, or dust covers on test stations, test equipment, or LRU's
- visually inspect and clean LRU's
- visually inspect and clean test stations
- order parts by telephone
- research microfiche for part information
- research materials for part numbers
- perform periodic inspections of test stations
- perform confidence checks of test stations
- pressurize LRU's
- remove or replace test station light bulbs, fuses, or minor hardware
- clean test station blower filters

Tasks performed in common by first-termers in both AFSC's are general in nature, were rated below average in task difficulty, and average or below in training emphasis. First-termers in each specialty also perform equipment specific tasks as a major part of their jobs (see Tables 18 and 23). Four pieces of equipment are commonly used by F-15 and F/FB-111 first enlistment personnel: the IFF Mode IV Computer Test Equipment group, ILS test set, AN/UPM-137, and the AN/URM-95A. Several special tools or items of equipment are also utilized by at least 30 percent of the 326X5A and 326X5B first enlistment personnel. These include, oscilloscopes, multimeters, spectrum analyzers, signal generators, and torque wrenches. However, as may be seen on Tables 20 and 25, many types of equipment are used primarily by members of one shred or the other but not by both.

Overall, comparison of the training aspects of the 326X5A and 326X5B specialties confirm the separate and unique nature of each shred, while still reflecting a common theme of manual test station maintenance.

## JOB SATISFACTION INDICATORS

Survey respondents have the opportunity in the background of the job inventory to express their job interest, perceived utilization of talents and training, sense of accomplishment, and reenlistment intentions. Several types of analysis were performed on these data.

Responses of all DAFSC 326X5 personnel are presented in Table 29, along with comparative sample data compiled for all personnel surveyed in 1980. These data also allow for the identification of trends in job satisfaction of AFS 326X5 personnel as related to personnel in similar specialties and to all specialties in general. The Integrated Avionics Manual Test Station Specialty is classified as a mission equipment maintenance specialty. In 1980, five specialties were surveyed in this area: Weather Equipment (AFSC 302X0), Telecommunications Systems (AFSC 307X0), Space Systems Equipment (AFSC 308X0), Avionic Sensor Systems (AFSC 322X2A/B/C), and Fabrication and Parachute (AFSC 427X3). These specialties constitute a comparative sample of 3,653 personnel as the data base for specialties "related" to avionic systems maintenance. Job satisfaction responses of 326X5 personnel are very similar to respondents in related specialties, and all 1980 survey respondents in general. Only in the area of reenlistment intention, does the 326X5 specialty show a lower positive response. Perhaps even more relevant is to compare these job satisfaction responses to respondents in other 326XX specialties. At the time of this survey, AFSCs 326X3A/B, 326X4A/B, 326X6A/B, 326X7A/B, and 326X8A/B were also being surveyed (see Table 30). Each specialty is responsible for maintaining different avionic systems on the F-15 or F/FB-111. The Manual Test Station respondents (AFS 326X5A) seem to have average job satisfaction responses when compared to the other 326XX specialties.

Comparisons of the job satisfaction indicators between DAFSC 326X5A and 326X5B personnel show quite a bit of variance by shred (see Table 31). Incumbents in the 326X5A (F/FB-111) specialty responded much more positively than AFS 326X5B (F-15) respondents, especially in the area of perceived utilization of talents and training. Reenlistment intentions are consistent for both specialty shreds.

As seen previously in the JOB STRUCTURE ANALYSIS, A-shred (F/FB-111) respondents formed several groups specializing in different functions and have higher job satisfaction, versus the B-shred (F-15) respondents which grouped into one job type and have lower job satisfaction responses.

TABLE 29

COMPARATIVE JOB SATISFACTION OF 326X5 SURVEY RESPONDENTS

		<u>1980 COMPARATIVE SAMPLE</u>	
	<u>AFSC</u> <u>326X5</u>	<u>MISSION</u> <u>EQUIPMENT</u> <u>MAINTENANCE</u> <u>*(N=3,653)</u>	<u>ALL 1980</u> <u>SPECIALTIES</u>
FINDS JOB INTERESTING:	62%	62%	65%
FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER:	71%	69%	72%
FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER:	72%	72%	64%
SATISFIED WITH SENSE OF ACCOMPLISHMENT:	56%	56%	61%
PLANS TO REENLIST:	42%	50%	57%

\*ALL MISSION EQUIPMENT MAINTENANCE SPECIALTIES SURVEYED IN 1980:  
AFSCs 302X0, 307X0, 308X0, 322X2A/B/C, AND 427X3

TABLE 30

## COMPARATIVE JOB SATISFACTION FOR 326XX SPECIALTIES SURVEYED IN 1981

	DAFSC					
	326X3A (N=203)	326X4A (N=352)	326X5A (N=109)	326X6A (N=221)	326X7A (N=189)	326X8A (N=180)
FINDS JOB INTERESTING:	76%	74%	66%	61%	76%	58%
FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER:	83%	83%	81%	67%	76%	65%
FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER:	92%	74%	84%	72%	83%	74%
SATISFIED WITH SENSE OF ACCOMPLISHMENT:	67%	64%	62%	49%	68%	55%
PLANS TO REENLIST:	26%	32%	35%	37%	43%	39%

	DAFSC					
	326X3B (N=94)	326X4B (N=212)	326X5B (N=118)	326X6B (N=101)	326X7B (N=104)	326X8B (N=111)
FINDS JOB INTERESTING:	68%	70%	60%	55%	67%	52%
FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER:	73%	73%	62%	51%	71%	59%
FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER:	61%	77%	65%	62%	70%	59%
SATISFIED WITH SENSE OF ACCOMPLISHMENT:	57%	61%	57%	42%	62%	45%
PLANS TO REENLIST:	33%	29%	38%	37%	41%	49%



TABLE 31

JOB SATISFACTION OF 326X5A/B SURVEY RESPONDENTS

	DAFSC		
	326X5A (N=109)	326X5B (N=118)	32675 (N=79)
FINDS JOB INTERESTING:	66%	60%	61%
FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER:	82%	62%	70%
FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER:	84%	65%	66%
SATISFIED WITH SENSE OF ACCOMPLISHMENT:	62%	57%	58%
PLANS TO REENLIST:	35%	38%	57%

## IMPLICATIONS

In the request for the survey of the AFS 326X5 specialty, two primary issues were raised: the possibility of assigning shreds to the 7-skill level, and the adequacy of training for the A- and B-shred personnel.

Survey data indicate separate and distinct jobs are performed by AFS 326X5A, 326X5B, and 32675 personnel. The only commonality exists in the performance of very general test station, LRU, or forms maintenance. These findings indicate the current classification structure is accurate in its depiction of the 326X5 specialty. Most 7-skill level personnel function as managers or supervisors in F/FB-111 or F-15 units but some 7-skill level individuals are found performing technical jobs or are working as supervisors (see Job Structure Analysis section). They are also conducting OJT for new personnel on the aircraft system assigned to their units. The specific aircraft orientation and OJT responsibilities of the 7-skill level individuals who are firstline supervisors or technicians would seem to support shredding the specialty through the 7-skill level. The fact that most 7-skill levels perform more nonaircraft specific tasks would support the present common 7-skill structure. The issue is compounded, however, by the great diversity of jobs and equipment involved with F/FB-111 personnel (AFS 326X5A). A further factor is the relatively small number of 7-skill level personnel (N=82); shredding a group this size would severely restrict assignment flexibility. All of these factors will be further complicated with the establishment of the additional shred for the F-16 system (AFS 326X5C). With the additional diversity of equipment and systems, a 7-skill level shred may be very practical, particularly in terms of enhancing aircraft specific OJT.

In response to the training question, the STS, POI, and jobs performed by first enlistment personnel were analyzed. The AFS 326X5A specialty is very diverse in its responsibilities. Several suggestions were made to further encompass some of these responsibilities. Due to the numerous types of test equipment utilized, more specialized training, as is currently provided for the AAI system, could be designed for systems, such as SATCOM, ILS, or Radar Test Sets. Very clear distinctions were also possible by MAJCOM and aircraft model, also suggesting a combination of common and specialized training might be appropriate. For AFS 326X5B respondents, who perform a very homogeneous function, the training documents are quite relevant to the job actually performed in the operational environment. The only additions involve the maintenance of UHF radios, and TACAN (ARN-118) systems. While revisions for each shred are suggested, the primary functions of each shred are accurate within the STS and POI.

## APPENDIX A

REPRESENTATIVE TASKS are provided for each cluster and Independent Job Type. BACKGROUND INFORMATION is provided for each job type within the clusters.

REPRESENTATIVE TASKS PERFORMED BY F/FB-111 MANUAL TEST  
STATION SHOP PERSONNEL  
(GRP011, N=108)

TASKS	PERCENT MEMBERS PERFORMING
H197 INSTALL CAPS, PLUGS, OR DUST COVERS ON TEST STATIONS, TEST EQUIPMENT, OR LRU's	100
H212 PRESSURIZE LRU's	99
H226 VISUALLY INSPECT AND CLEAN TEST STATIONS	98
H194 CLEAN TEST STATION BLOWER FILTERS	98
H225 VISUALLY INSPECT AND CLEAN LRU's	97
H199 INVENTORY TEST STATIONS OR ROLLAWAYS	96
H208 PERFORM PERIODIC INSPECTIONS OF TEST STATIONS	96
H204 PERFORM CONFIDENCE CHECKS OF TEST STATIONS	95
H223 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR MINOR HARDWARE	94
H207 PERFORM PERIODIC INSPECTIONS OF TEST EQUIPMENT	94
F160 ORDER PARTS BY TELEPHONE	93
M390 BENCHCHECK F/FB-111 CENTRAL AIR DATA COMPUTERS	92
H196 INSPECT EQUIPMENT FOR CORRECT CALIBRATION DATES	92
P538 BENCHCHECK F/FB-111 ANTICOLLISION LIGHTS	91
F167 RESEARCH MICROFICHE FOR PART INFORMATION	91
H206 PERFORM FUNCTIONAL CHECKS OR TEST AND INSPECTION (T AND I) OF LRU's ISSUED FROM SUPPLY	90
K272 BENCHCHECK B/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS	90
P557 ISOLATE MALFUNCTIONS IN F/FB-111 ANTICOLLISION LIGHTS	89
M393 BENCHCHECK F/FB-111 MAXIMUM SAFE MACH ASSEMBLIES	88
P527 ALIGN F/FB-111 ANTICOLLISION LIGHTS	87
K271 BENCHCHECK F/FB-111 ARC-164 UHF RADIO SET CONTROLS	86
H222 REMOVE OR REPLACE TEST STATION CABLE ASSEMBLY PINS OR HARDWARE	86
F166 RESEARCH MANUALS FOR PART NUMBERS	85
M404 ISOLATE MALFUNCTIONS IN F/FB-111 MAXIMUM SAFE MACH ASSEMBLIES TO SRU OR CHASSIS	83
L311 BENCHCHECK F/FB-111 HF ANTENNA COUPLERS	83
M422 REMOVE OR REPLACE F/FB-111 CENTRAL AIR DATA COMPUTER SRU's	82
M426 REMOVE OR REPLACE F/FB-111 MAXIMUM SAFE MACH ASSEMBLY SRU's	82
K269 ALIGN F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS	82
P568 REMOVE OR REPLACE F/FB-111 ANTICOLLISION LIGHT BITS AND PIECES	81
M399 ISOLATE MALFUNCTIONS IN F/FB-111 CENTRAL AIR DATA COMPUTERS TO SRU OR CHASSIS	81
K275 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 UHF RECEIVER TRANSMITTERS TO SRU OR CHASSIS	81
N451 BENCHCHECK F/FB-111 APX-64 IFF SYSTEM CONTROL BOXES	81
L294 ALIGN F/FB-111 HF ANTENNA COUPLERS	81
L310 BENCHCHECK F/FB-111 HF ANTENNA COUPLER CONTROLS	81
E136 ANNOTATE SIGNIFICANT HISTORICAL DATA FORMS (AFTO FORM 95)	80
H213 REMOVE OR INSTALL TEST REPLACEABLE UNITS (TRU's)	80
K273 ISOLATE MALFUNCTIONS IN F/FB-111 ARC-164 RADIO SET CONTROLS TO SRU OR CHASSIS	80
J245 BENCHCHECK F/FB-111 ILS GLIDE SLOPE MARKER BEACON RECEIVERS	80

TABLE A1

## BACKGROUND INFORMATION FOR F/FB-111 MANUAL TEST STATION SHOP JOB TYPE GROUPS

	TACAN (GRP093)	AAI (GRP116)	MISSION & TRAFFIC CONTROL (ARC-123) (GRP102)	MISSION & TRAFFIC CONTROL (ARC-112) (GRP091)	SATCOM (GRP081)	CADC (GRP058)	GENERAL MAINT (GRP037)
NUMBER IN GROUP:	8	6	40	13	9	7	7
PERCENT OF CLUSTER:	7%	6%	37%	12%	8%	6%	6%
PERCENT LOCATED OVERSEAS:	27%	100%	73%	8%	NONE	29%	29%

## DAFSC DISTRIBUTION:

32635A	-	-	7%	-	11%	-	14%
32655A	75%	100%	70%	92%	89%	86%	86%
326XSB	-	-	-	-	-	-	-
32675	25%	-	23%	8%	-	14%	-

AVERAGE GRADE:	E-4	E-4	E-4,E-5	E-3,E-4	E-4	E-4	E-3,E-4
AVERAGE TIME IN SERVICE:	81 MOS	46 MOS	81 MOS	48 MOS	38 MOS	64 MOS	32 MOS
PERCENT SUPERVISING:	37%	NONE	40%	23%	11%	NONE	NONE
PERCENT IN FIRST ENLISTMENT:	63%	83%	33%	69%	100%	57%	100%
AVERAGE NUMBER OF TASKS PERFORMED:	166	244	224	216	236	140	97

FINDS JOB INTERESTING:	68%	67%	68%	54%	100%	57%	72%
FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER:	50%	67%	82%	77%	100%	100%	86%
FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER:	62%	67%	97%	77%	100%	100%	71%
SATISFIED WITH SENSE OF ACCOMPLISHMENT:	50%	50%	55%	46%	89%	57%	57%
PLANS TO REENLIST:	25%	17%	45%	39%	56%	29%	14%

TABLE A2

## AVIONICS AGE EQUIPMENT UTILIZED BY F/FB-111 MANUAL TEST STATION JOB TYPE GROUPS

A3

	TACAN	AAI	MISSION & TRAFFIC CONTROL			SATCOM	CADC	GENERAL MAINTENANCE
			ARC-123	ARC-112				
AIR-TO-AIR INTERROGATOR TEST EQUIPMENT GROUPS (AN/APX-75 HOT MOCK-UPS)	0	100%	15%	0	0	0	0	14%
CENTRAL AIR DATA COMPUTERS (12A1803A1)	100%	100%	100%	100%	78%	100%	100%	100%
COMMUNICATIONS AND NAVIGATIONAL AIDS TEST STATIONS (12A16850)	100%	67%	90%	100%	89%	86%	71%	71%
ELECTRICAL TEST STATIONS (12A3409)	25%	100%	88%	100%	11%	29%	29%	29%
ELECTRICAL TEST STATIONS (12A3439)	75%	17%	23%	8%	100%	71%	57%	57%
EMERGENCY RADIO TEST EQUIPMENT GROUPS (AN/URM-95A)	25%	67%	83%	100%	0%	14%	29%	29%
IDENTIFICATION-FRIEND-OR-FOE (IFF) MODE IV COMPUTER TEST EQUIPMENT GROUPS (KIR/KIT)	100%	83%	93%	85%	100%	86%	71%	71%
IDENTIFICATION-FRIEND-OR-FOE (IFF) TEST EQUIPMENT GROUPS (AN/APX-64 HOT MOCK-UPS)	100%	100%	85%	85%	89%	57%	86%	86%
INSTRUMENT LANDING SYSTEM (ILS) TEST SETS	100%	83%	75%	85%	89%	71%	43%	43%
MISSION & TRAFFIC CONTROL TEST STATIONS (12A16849)	25%	100%	85%	100%	0%	29%	14%	14%
MISSION & TRAFFIC CONTROL TEST STATIONS (12A16879)	75%	17%	18%	8%	89%	71%	57%	57%
RADAR TEST SETS AN/UPM-137	100%	67%	68%	77%	78%	29%	57%	57%
SATELLITE COMMUNICATIONS TEST STATIONS	75%	0%	10%	0%	89%	29%	43%	43%
SIGNAL/DATA CONVERTER TEST STATIONS	63%	0%	30%	85%	22%	57%	14%	14%
TACTICAL AIR NAVIGATION (TACAN) TEST EQUIPMENT GROUPS (AN/ARN-84 HOT MOCK-UP)	88%	33%	58%	23%	67%	71%	14%	14%
TACTICAL AIR NAVIGATION (TACAN) TEST EQUIPMENT GROUPS (AN/ARN-118 HOT MOCK-UP)	0%	67%	43%	92%	0%	29%	14%	14%
ULTRA HIGH FREQUENCY (UHF) TEST EQUIPMENT GROUPS (AN/ARC-164 HOT MOCK-UPS)	100%	83%	100%	77%	89%	71%	71%	71%

REPRESENTATIVE TASKS PERFORMED BY F-15 MANUAL TEST STATION SHOP PERSONNEL  
(GRP044, N=122)

TASKS	PERCENT MEMBERS PERFORMING
R647 BENCHCHECK F-15 RADAR SYSTEM ANTENNAS	99
R651 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM ANTENNAS	98
R648 BENCHCHECK F-15 RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES	98
R652 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES	98
R649 BENCHCHECK F-15 RADAR SYSTEM TRANSMITTERS	98
R653 ISOLATE MALFUNCTIONS IN F-15 RADAR SYSTEM TRANSMITTERS	98
T746 ISOLATE MALFUNCTIONS IN F-15 INTEGRATED COMMUNICATIONS CONTROL PANELS	98
T712 BENCHCHECK F-15 FUEL QUANTITY INDICATORS	98
T715 BENCHCHECK F-15 INTEGRATED COMMUNICATIONS CONTROL PANELS	97
H197 INSTALL CAPS, PLUGS, OR DUST COVERS ON TEST STATIONS, TEST EQUIPMENT, OR LRU's	97
T721 BENCHCHECK F-15 MAIN COMMUNICATIONS CONTROL PANELS	97
S679 BENCHCHECK F-15 ILS TEST SETS	97
R646 ASSEMBLE OR DISASSEMBLE F-15 RADAR SYSTEM ANTENNAS	96
R644 ALIGN F-15 RADAR SYSTEM ANTENNAS	96
R645 ALIGN F-15 RADAR SYSTEM TRANSMITTERS	96
T705 BENCHCHECK F-15 CAUTION LIGHT LOGIC UNITS	96
T741 ISOLATE MALFUNCTIONS IN F-15 CAUTION LIGHT LOGIC UNITS	96
T692 ADJUST F-15 CONTROLLER AIRCRAFT GRIP ASSEMBLIES	95
T714 BENCHCHECK F-15 IDENTIFICATION FRIEND-OR-FOE (IFF) CONTROL PANELS	95
H204 PERFORM CONFIDENCE CHECKS OF TEST STATIONS	95
R655 SERVICE F-15 AN/GSM-228 TEST STATION COOLING AND CONDITIONING UNITS WITH COOLANT OIL	95
T704 BENCHCHECK F-15 CAUTION LIGHT DISPLAY UNITS	95
S666 ALIGN F-15 ILS TEST SETS	95
R657 SERVICE F-15 AN/GSM-228 TEST STATION HYDRAULIC POWER SUPPLIES	95
H208 PERFORM PERIODIC INSPECTIONS OF TEST STATIONS	94
T694 ALIGN F-15 INTEGRATED COMMUNICATIONS CONTROL PANELS	94
T713 BENCHCHECK F-15 GENERATOR CONTROL UNITS	94
H226 VISUALLY INSPECT AND CLEAN TEST STATIONS	93
T749 ISOLATE MALFUNCTIONS IN F-15 MOTION PICTURE CAMERAS	93
T722 BENCHCHECK F-15 MOTION PICTURE CAMERAS	93
R656 SERVICE F-15 AN/GSM-228 TEST STATION FLUSH AND FILL UNITS	93
H225 VISUALLY INSPECT AND CLEAN LRU's	93
T748 ISOLATE MALFUNCTIONS IN F-15 MAIN COMMUNICATION CONTROL PANELS	93
T707 BENCHCHECK F-15 CONTROLLER AIRCRAFT GRIP ASSEMBLIES	93
T745 ISOLATE MALFUNCTIONS IN F-15 IFF CONTROL PANELS	93
T702 BENCHCHECK F-15 BUILT-IN TEST CONTROL/DISPLAY PANELS	93
T740 ISOLATE MALFUNCTIONS IN F-15 CAUTION LIGHT DISPLAY UNITS	93
S678 BENCHCHECK F-15 ILS RADIO RECEIVERS	93
S659 ALIGN F-15 APX-76 RADIO-RECEIVER TRANSMITTERS	92
R650 CALIBRATE F-15 AN/GSM-228 TEST STATIONS	92
T744 ISOLATE MALFUNCTIONS IN F-15 GENERATOR CONTROL UNITS	92
S690 ISOLATE MALFUNCTIONS IN F-15 ILS TEST SET LRU's TO BIT AND PIECE	92
S689 ISOLATE MALFUNCTIONS IN F-15 ILS RADIO RECEIVERS	92
T698 BENCHCHECK F-15 ALTITUDE INDICATORS	92

TABLE A3

BACKGROUND INFORMATION FOR F-15 MANUAL TEST STATION  
SHOP JOB TYPE GROUPS

	<u>F-15 MANUAL TEST STATION SHIFT SUPERVISORS</u>	<u>F-15 MANUAL TEST STATION OPERATORS-MAINT</u>
NUMBER IN GROUP:	5	114
PERCENT OF CLUSTER:	4%	93%
PERCENT LOCATED OVERSEAS:	40%	47%
<hr/>		
DAFSC DISTRIBUTION:		
326X5A	-	
32635B	-	8%
32655B	60%	81%
32675	40%	11%
<hr/>		
AVERAGE GRADE:	E-5	E-4
AVERAGE TIME IN SERVICE:	124 MOS	59 MOS
PERCENT SUPERVISING:	100%	38%
PERCENT IN FIRST ENLISTMENT:	NONE	57%
AVERAGE NUMBER OF TASKS PERFORMED:	97	146
<hr/>		
FINDS JOB INTERESTING:	60%	55%
FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER:	40%	61%
FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER:	80%	63%
SATISFIED WITH SENSE OF ACCOMPLISHMENT:	60%	47%
PLANS TO REENLIST:	100%	39%



REPRESENTATIVE TASKS PERFORMED BY MANAGEMENT CLUSTER PERSONNEL  
(GRP022, N=34)

TASKS	PERCENT MEMBERS PERFORMING
C80 PREPARE APR's	94
B45 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	88
A6 DETERMINE WORK PRIORITIES	88
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED MATTERS	88
C57 ENDORSE AIRMAN PERFORMANCE REPORTS (APR)	85
B54 WRITE CORRESPONDENCE	82
C85 REVIEW MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349) FOR ACCURACY	82
C64 EVALUATE INDIVIDUALS FOR RECOGNITION	82
F167 RESEARCH MICROFICHE FOR PART INFORMATION	82
C56 CERTIFY STATUS OF REPARABLE, SERVICEABLE, OR CONDEMNED PARTS	79
E122 ANNOTATE ISSUE/TURN IN REQUEST FORMS (AF FORM 2005)	79
C83 REVIEW CORRESPONDENCE	76
C84 REVIEW EQUIPMENT RECORDS FOR ACCURACY	76
C60 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	76
C82 PREPARE REPLIES TO INSPECTION REPORTS	76
F166 RESEARCH MANUALS FOR PART NUMBERS	76
B52 SUPERVISE INTEGRATED AVIONICS MANUAL TEST STATION AND COMPONENT TECHNICIANS (AFSC 32675)	74
C86 REVIEW TECHNICAL ORDER IMPROVEMENT REPORTS	74
A23 PLAN WORK ASSIGNMENTS	74
E124 ANNOTATE MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	74
A3 COORDINATE JOB REQUIREMENTS WITH OTHER SECTIONS	74
A17 PARTICIPATE IN MEETINGS, SUCH AS STAFF MEETINGS, BRIEFINGS, CONFERENCES, OR WORKSHOPS	71
E138 ANNOTATE SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORMS 244 AND 245)	71
D98 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	68
A9 DEVELOP SELF-INSPECTION PROGRAMS	68
C79 PERFORM PRODUCTION OR SUPERVISORY INSPECTIONS OF LRU's	68
A15 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	68
C69 EVALUATE MATERIAL DEFICIENCY REPORTS	68
E143 ANNOTATE UNSERVICEABLE (REPARABLE) TAG MATERIEL FORMS (DD FORM 1577-2)	68
D97 COUNSEL TRAINEES ON TRAINING PROGRESS	68
E132 ANNOTATE REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	68
E142 ANNOTATE UNSERVICEABLE (CONDEMNED) TAG MATERIEL FORMS (DD FORM 1577)	68
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	68
P42 IMPLEMENT SELF-INSPECTION PROGRAMS	65
E136 ANNOTATE SIGNIFICANT HISTORICAL DATA FORMS (AFTO FORM 95)	65
E137 ANNOTATE SUPPLY CONTROL LOG FORMS (AF FORM 2413)	65
E139 ANNOTATE TECHNICAL ORDER SYSTEM PUBLICATION IMPROVEMENT REPORT AND REPLY FORMS (AFTO FORM 22)	65
E120 ANNOTATE DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT FORMS (DD FORM 1348-1)	65

TABLE A4  
BACKGROUND INFORMATION FOR MANAGEMENT CLUSTER  
JOB TYPE GROUPS

	<u>F/FB-111 MANUAL TEST STATION SHIFT SUPERVISORS</u>	<u>MANUAL TEST STATION SHOP CHIEFS</u>
NUMBER IN GROUP:	8	15
PERCENT OF CLUSTER:	24%	44%
PERCENT LOCATED OVERSEAS:	50%	33%
<hr/>		
DAFSC DISTRIBUTION:		
326X5A	-	7%
326X5B	-	-
32675	100%	93%
<hr/>		
AVERAGE GRADE:	E-6	E-6
AVERAGE TIME IN SERVICE:	183 MOS	211 MOS
PERCENT SUPERVISING:	100%	100%
PERCENT IN FIRST ENLISTMENT:	NONE	NONE
AVERAGE NUMBER OF TASKS PERFORMED:	84	101
<hr/>		
FINDS JOB INTERESTING:	38%	73%
FEELS TALENTS UTILIZED FAIRLY WELL OR BETTER:	62%	80%
FEELS TRAINING UTILIZED FAIRLY WELL OR BETTER:	50%	80%
SATISFIED WITH SENSE OF ACCOMPLISHMENT:	25%	60%
PLANS TO REENLIST:	50%	47%
PLANS TO RETIRE:	13%	47%

REPRESENTATIVE TASKS PERFORMED BY TRAINING PERSONNEL  
(GRP004, N=18)

TASKS	PERCENT MEMBERS PERFORMING
D98 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	83
D116 WRITE TEST QUESTIONS	78
D91 ADMINISTER TESTS	72
D95 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	67
D113 PREPARE LESSON PLANS	67
D115 SCORE TESTS	67
D97 COUNSEL TRAINEES ON TRAINING PROGRESS	67
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED MATTERS	56
D102 DEVELOP TRAINING AIDS	50
F156 MAINTAIN TECHNICAL ORDER FILES	44
H199 INVENTORY TEST STATIONS OR ROLLAWAYS	39
H197 INSTALL CAPS, PLUGS, OR DUST COVERS ON TEST STATIONS, TEST EQUIPMENT, OR LRU's	39
F154 MAINTAIN STANDARD AIR FORCE PUBLICATIONS, REGULATIONS, OR MANUALS	33
D114 PROCURE TRAINING AIDS, SPACE OR EQUIPMENT	33
D109 EVALUATE TRAINING PROGRESS OF RESIDENT COURSE STUDENTS	33
D111 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	33

